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EMPLOYMENT-UNEMPLOYMENT

HEARINGS

BEFORE THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ONE HUNDREDTH CONGRESS

FIRST SESSION

PART 28

JANUARY 9, FEBRUARY 6, MARCH 6, APRIL 3, MAY 8, AND JUNE 5, 1987

[HEARING DAYS OF APRIL 5, MAY 3, JUNE 7, JULY 5, AUGUST 2, SEPTEMBER 6, OCTOBER 4, NOVEMBER 1, AND DECEMBER 6, 1985, AND JANUARY 8, FEBRUARY 7, MARCH 7, MAY 2, JUNE 6, AUGUST 1, SEPTEMBER 5, OCTOBER 3, NOVEMBER 7, AND DECEMBER 5, 1986, WERE NOT PRINTED; A CORRECTED COPY OF THE STENOGRAPHIC PROCEEDINGS FOR EACH DAY MAY BE FOUND IN THE COMMITTEE FILES. HEARING DAYS OF APRIL 4 AND JULY 4, 1986, WERE NOT HELD.]

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CONTENTS

WITNESSES AND STATEMENTS

Friday, January 9, 1987

Page

Sarbanes, Hon. Paul S., chairman of the Joint Economic Committee: Opening statement 1

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics; Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions; and George L. Stelluto, Associate Commissioner, Office of Wages and Industrial Relations 2

Friday, February 6, 1987

Sarbanes, Hon. Paul S., chairman of the Joint Economic Committee: Opening statement 157

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics; and Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions 158

Friday, March 6, 1987

McMillan, Hon. J. Alex, member of the Joint Economic Committee: Opening statement 229

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics; Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions; and Jerome A. Mark, Associate Commissioner, Office of Productivity and Technology 229

Friday, April 3, 1987

Sarbanes, Hon. Paul S., chairman of the Joint Economic Committee: Opening statement 331

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics; and Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions 331

Friday, May 8, 1987

Sarbanes, Hon. Paul S., chairman of the Joint Economic Committee: Opening statement 363

Wylie, Hon. Chalmers P., member of the Joint Economic Committee: Opening statement 364

Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics; and Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions 364

FRIDAY, JUNE 5, 1987

Page
Proxmire, Hon. William, member of the Joint Economic Committee, presiding: Opening statement 393
Norwood, Hon. Janet L., Commissioner, Bureau of Labor Statistics, Department of Labor, accompanied by Thomas J. Plewes, Associate Commissioner, Office of Employment and Unemployment Statistics; and Kenneth V. Dalton, Associate Commissioner, Office of Prices and Living Conditions 394

SUBMISSIONS FOR THE RECORD

FRIDAY, JANUARY 9, 1987

Norwood, Hon. Janet L., et al.:

- Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 6
- Press release No. 87-13 entitled "The Employment Situation: December 1986," Bureau of Labor Statistics, Department of Labor, January 9, 1987 8
- Press release No. 87-12 entitled "Producer Price Indexes—December 1986," Bureau of Labor Statistics, Department of Labor, January 9, 1987 30
- Response to Senator Sarbanes' query regarding definition of part-time workers 46
- Bulletin No. 2262 entitled "Employee Benefits in Medium and Large Firms, 1985," Bureau of Labor Statistics, Department of Labor, July 1986 60

FRIDAY, FEBRUARY 6, 1987

Norwood, Hon. Janet L., et al.:

- Prepared statement 161
- Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 169
- Press release No. 87-50 entitled "The Employment Situation: January 1987," Bureau of Labor Statistics, Department of Labor, February 6, 1987 171
- Response to Senator Sarbanes' request to supply for the record the overall civilian employment-population ratio 194
- Tabular response to Senator Sarbanes' request to supply for the record the employment status of the Hispanic population 204
- Response to Senator Sarbanes' query regarding the percentage of the population not in the labor force 206
- Response to Senator Melcher's question regarding employment data on various types of mining 221

FRIDAY, MARCH 6, 1987

Norwood, Hon. Janet L., et al.:

- Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 232
- Press release No. 87-93 entitled "The Employment Situation: February 1987," Bureau of Labor Statistics, Department of Labor, March 6, 1987 234
- Report 736 entitled "The Consumer Price Index: 1987 Revision," Bureau of Labor Statistics, Department of Labor, January 1987 253
- Article entitled "Japan's Low Unemployment: An In-Depth Analysis," Monthly Labor Review, March 1984 271
- Article entitled "Recent Recessions Swell Ranks of the Long-Term Unemployed," Monthly Labor Review, February 1984 287
- Response to Representative Solarz' question regarding U.S. productivity rates compared to the rates of other industrial democracies 293
- Article entitled "Hourly Paid Workers: Who They Are and What They Earn," Monthly Labor Review, February 1986 300
- Response to Representative McMillan's request for data on poverty and what impact public assistance has in reducing poverty 308
- Response to Representative Solarz' questions regarding the causes of long-term unemployment 310
- Response to Representative Solarz' request for a list of studies on the effects of the minimum wage 320

Norwood, Hon. Janet L., et al.—Continued Page
Response to Representative Solarz' query regarding the increase in personal debt 325
Sarbanes, Hon. Paul S., chairman of the Joint Economic Committee: Written opening statement 226

FRIDAY, APRIL 3, 1987

Norwood, Hon. Janet L., et al.:
Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 333
Press release No. 87-137 entitled "The Employment Situation: March 1987," Bureau of Labor Statistics, Department of Labor, April 3, 1987 335

FRIDAY, MAY 8, 1987

Norwood, Hon. Janet L., et al.:
Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 367
Press release No. 87-185 entitled "The Employment Situation: April 1987," Bureau of Labor Statistics, Department of Labor, May 8, 1987 369

FRIDAY, JUNE 5, 1987

McMillan, Hon. J. Alex, member of the Joint Economic Committee: Written opening statement 394
Norwood, Hon. Janet L., et al.:
Table reflecting unemployment rates of all civilian workers by alternative seasonal adjustment methods 396
Press release No. 87-423 entitled "The Employment Situation: May 1987," Bureau of Labor Statistics, Department of Labor, June 5, 1987 398

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, JANUARY 9, 1987

Congress of the United States,
Joint Economic Committee,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senators Sarbanes and Melcher.

Also present: Dena Stoner, William R. Buechner, Christopher J. Frenze, and Dale Jahr, professional staff members.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator Sarbanes. The committee will come to order. I am very pleased to welcome Commissioner Norwood before the Joint Economic Committee this morning to testify on the December employment and unemployment figures.

I do so in my capacity as the incoming chairman of the Joint Economic Committee in the 100th Congress, the 12th chairman of the committee since its establishment in the 79th Congress by the Employment Act of 1946. It is a great honor to serve as chairman of a committee which over the years has been served by very distinguished chairmen, drawn from both the Senate and the House; a committee which has sponsored and encouraged major research and inquiry over the last 40 years into virtually every aspect of the Nation's economy; and which has played an indispensable role in assuring reasoned and informed debate over the appropriate course of the Nation's economic policy.

I am pleased also to welcome Senator Melcher, who is a new member of the committee. John, we are very pleased to have you here.

Senator Melcher. Thank you very much, Paul.

Senator Sarbanes. Today's hearing is the first by the Joint Economic Committee in the 100th Congress. It is also the latest in the series of monthly employment-unemployment hearings which began in the 92d Congress nearly 16 years ago, with a hearing on April 2, 1971, chaired by my distinguished colleague, Senator Proxmire of Wisconsin. The witness then was Geoffrey Moore, who at the time served as Commissioner of the Bureau of Labor Statistics. Since then the monthly unemployment hearings, of which this is the latest, have been held by each successive chairman of the committee. The Bureau of Labor Statistics has been represented before the committee by Commissioner Moore; subsequently by Commissioner Julius Shiskin; and for the last 9 years by Commissioner

Janet Norwood—all three Commissioners, I might note, are highly respected professionals in their field.

In a sense, Commissioner Norwood, it's appropriate that you should be the first witness before the Joint Economic Committee in this Congress. Through the years the Bureau of Labor Statistics and the Joint Economic Committee have had a close and productive working relationship which has been very important to the Joint Economic Committee and equally so, I hope, to the Bureau of Labor Statistics. As Commissioner since 1979 and Acting Commissioner for the year before that, you have played a pivotal role in assuring the integrity of our Nation's labor market data, which are among the most sensitive economic figures issued by the Federal Government. You have served Democratic and Republican administrations alike with great skill, and have won the respect of Members in both Houses and on both sides of the aisle. It is always a pleasure to welcome you before the committee and we now would appreciate having your comments on the December employment and unemployment figures and the overall figures for 1986.

Before you begin, Commissioner, I would turn to Senator Melcher if he has any comments he would like to make before you begin with your testimony.

Senator MELCHER. No, Mr. Chairman, I have no comments at this time.

Senator SARBANES. Fine. Commissioner Norwood.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND GEORGE L. STELLUTO, ASSOCIATE COMMISSIONER, OFFICE OF WAGES AND INDUSTRIAL RELATIONS

Mrs. NORWOOD. Thank you very much, Mr. Chairman. It's a very great pleasure to appear before you. We feel that our relationship with the Joint Economic Committee is extremely important to us and, I might add, to the country.

I have, as usual, two experts with me. On my right is Kenneth Dalton, who is our price expert; and on my left is Thomas Plewes, who is responsible for employment and unemployment analysis.

THE EMPLOYMENT SITUATION

Employment continued to grow moderately in December, and unemployment declined over the month. The overall jobless rate was 6.6 percent and the rate for civilian workers was 6.7 percent. Both rates were down two-tenths of a point from their revised November levels.

As you know, our usual practice, in issuing the data for December is to incorporate new seasonal factors based on the most recent year's experience—in this case, 1986—which may require revisions in some previously issued numbers. Although revisions were quite small, the revised rates do show more clearly than the previously published data that a slight decline in the jobless rate occurred in the second half of 1986.

The over-the-month seasonally adjusted decline in unemployment, though small, was fairly widespread among major worker groups. However, the jobless rate for Hispanic workers, which tends to be quite volatile, returned to the October level. Unemployment rates for black workers, especially for black teenagers, continue to be quite high, more than twice the rate of white workers. Joblessness among blacks, however, showed a greater decline over the past year.

Civilian employment, as measured by the household survey, edged up by about 200,000 in December, after seasonal adjustment; most of the change occurred among adult men. A record 60.9 percent of the civilian population was employed in December, the same ratio as November. During 1986, employment rose by about 2.2 million—after adjustment for the revised population counts.

Nonfarm payroll jobs, as measured by our business survey, rose by 270,000 in December after seasonal adjustment. As has been the case in recent months, virtually all of the increase occurred in the service-producing sector. The largest changes occurred in the services industry itself and in finance, insurance, and real estate. Employment in retail trade was unchanged after seasonal adjustment; the number of jobs in eating and drinking places continued to grow, but the gain was offset by less than usual holiday hiring in general merchandise stores.

Factory employment continued to edge up in December. The BLS diffusion index, which is heavily weighted toward manufacturing, showed, for the second month in a row, that more than 60 percent of the industries in the index had over-the-month employment increases. Since September, factory job gains have totaled 85,000 but the level of factory employment in December was still more than 100,000 below the level of last January. A number of manufacturing industries wound up the year with sizable job losses. The largest of these 1986 job losses occurred in the machinery, primary and fabricated metal, automobile, and electrical equipment industries.

The factory workweek—at 40.9 hours in December—is very high by historic standards. Aggregate hours in the Nation's factors are very near the level of a year ago, in spite of the decline over the year in the number of factory jobs.

Employment in construction changed little over the month after seasonal adjustment. Jobs in the oil and gas extraction industry, which had held steady in October and November, declined again in December. The industry lost nearly 150,000 jobs during 1986, a quarter of its work force.

Overall, payroll job growth was more moderate last year than earlier in the recovery. More than 2.4 million jobs were added to nonfarm payrolls during 1986. The services industry itself, fueled by sharp job growth in business and health services, accounted for more than 4 out of every 10 new payroll jobs in 1986. Employment in retail trade was up by nearly 600,000 over the year, with much of the growth in eating and drinking establishments. Jobs in finance, insurance, and real estate rose by 370,000. Growth was especially rapid in the finance industry, as lower interest rates brought increased demand for new and refinanced home mortgages.

Although the labor force was little changed in December, it has grown by nearly 2 million over the past year. Adult women accounted for a smaller proportion of that growth than in recent years—about 53 percent. The number of discouraged workers—those not in the labor force who wanted a job but felt that job search would be useless—remained at 1.1 million in the fourth quarter of 1986. There has been very little change in the size of this group for more than a year now.

In summary, employment, especially in services, continued its upward trend, and unemployment declined in December. Factory jobs, although well below the level at the beginning of the year, have shown small growth in each of the months of the fourth quarter of 1986, and factory hours remain quite strong.

PRODUCER PRICES

Mr. Chairman, we also released this morning the data for the December Producer Price Index and I have a few comments on those data.

The Producer Price Index for finished goods showed no change from November to December after seasonal adjustment. The index had registered modest increases in each of the 4 previous months. Prices received by domestic producers of intermediate goods again moved up slightly, and crude material prices fell back to their September level.

Reviewing Producer Price Index data for the year as a whole, we see that the dramatic cuts in prices for energy goods—particularly crude oil, refined petroleum products, and natural gas—were the driving force behind the unusually large drops in each of the three major stage-of-processing index groupings during 1986. We are unlikely to observe further deflationary pressure from this source, at least to that degree. And although there has been some firming in prices for petroleum-related products after the most recent OPEC agreement, I doubt that this development threatens to reaccelerate inflation to double-digit levels in the immediate future.

While fluctuations in energy prices dominated PPI movements in 1986, I want to emphasize the continuation of a very moderate, what might be called "underlying" rate of inflation. Prices for finished goods outside the volatile energy and food sectors, for example, rose less than 3 percent for the 4th consecutive year. Furthermore, prices for most industrial materials again showed relatively modest changes. Our index for intermediate goods less foods and energy—a broad sample of industrial materials including items such as steel, aluminum, textile fibers, industrial chemicals, lumber, cement, and paper—was virtually unchanged over the year and, in fact, stands at exactly the same level as in December 1984. Considering that we are now entering the 5th year of economic expansion, I believe our Nation's recent record on inflation is quite remarkable.

Of course, I recognize—and I think we all need to—the lower prices that are so welcome in some segments of our society at the same time reflect an enormous burden on many of our domestic producers. In particular, falling prices have constituted a major problem for many of our farms and our energy industry, while profit margins for some manufacturing concerns are being seriously restrained by intense foreign competition.

Mr. Chairman, my colleagues and I would be very glad to try to answer any questions.

[The table attached to Mrs. Norwood's statement, together with the press releases referred to, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unad-justed rate (1)	X-11 ARIMA method						X-11 method (official method before 1980) (8)	Range (cols. 2-8) (9)
		Official procedure (2)	Concurrent (as first computed) (3)	Concurrent (revised) (4)	Stable (5)	Total (6)	Residual (7)		
1985									
December....	6.7	7.0	7.0	7.0	7.0	7.0	7.0	7.0	-
1986									
January.....	7.3	6.8	6.8	6.8	6.7	6.8	6.6	6.7	.2
February....	7.8	7.2	7.2	7.2	7.2	7.2	7.2	7.3	.1
March.......	7.5	7.2	7.2	7.2	7.1	7.1	7.1	7.1	.1
April.......	7.0	7.1	7.1	7.1	7.2	7.1	7.1	7.1	.1
May.........	7.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	-
June........	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	-
July........	7.0	7.0	7.0	7.0	7.0	6.9	7.0	7.0	.1
August......	6.7	6.8	6.8	6.8	6.8	6.9	7.0	6.8	.2
September...	6.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	-
October.....	6.6	6.9	6.9	6.9	7.0	6.9	6.9	7.0	.1
November....	6.6	6.9	6.9	6.9	6.9	6.9	7.0	7.0	.1
December....	6.3	6.7	6.7	6.7	6.6	6.7	6.7	6.7	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
January 1987

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1975 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1985 would be based, during 1985, on the adjustment of data from the period January 1975 through January 1985.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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THE EMPLOYMENT SITUATION: DECEMBER 1986

Employment continued to rise in December and unemployment declined, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall unemployment rate was 6.6 percent and the civilian worker rate was 6.7 percent; both were down two-tenths of a percentage point from the revised figures for the prior 2 months.

Nonagricultural payroll employment--as measured by the monthly survey of establishments--rose by 270,000 in December while civilian employment--as measured by the monthly survey of households--was up by 205,000. Both employment series showed growth in excess of 2 million during 1986.

Unemployment (Household Survey Data)

The number of unemployed persons declined by 295,000 in December, after adjustment for seasonality, to 7.9 million. After holding steady for 2 months, the civilian jobless rate fell 0.2 percentage point to 6.7 percent. With the exception of December, the unemployment rate fluctuated within two-tenths of the annual average of 7.0 percent throughout 1986. (See table A-2.)

December unemployment rates for adult men (6.0 percent), adult women (5.9 percent), teenagers (17.3 percent), whites (5.8 percent), and blacks (13.7 percent) were slightly below those of the previous month. However, the jobless rate for Hispanics rose to 10.5 percent, offsetting a decline in November. During 1986, jobless rates for adult women, teenagers, whites, and blacks declined, whereas those for adult men and Hispanics showed little or no improvement. (See tables A-2 and A-3.)

The bulk of the December decline in unemployment took place among the medium-term jobless--those out of work 5 to 14 weeks. The mean and median duration of unemployment were about unchanged at 15.0 and 7.1 weeks,

> This release incorporates annual revisions in seasonally adjusted unemployment and other labor force series derived from the household survey. The 1986 overall and civilian worker unemployment rates as first computed and as revised, plus additional information on the revisions, appear on page 5.

respectively. Both measures have changed little over the past year. (See table A-7.)

Civilian Employment and the Labor Force (Household Survey Data)

Civilian employment, at 110.6 million, rose by 205,000 in December. Over the year, total employment advanced by 2.2 million, with adult women

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Nov.-Dec. change
	1986		1986			
	III	IV	Oct.	Nov.	Dec.	
HOUSEHOLD DATA						
	Thousands of persons					
Labor force 1/	119,866	120,308	120,163	120,426	120,336	-90
Total employment 1/	111,675	112,170	111,941	112,183	112,387	204
Civilian labor force	118,171	118,558	118,414	118,675	118,586	-89
Civilian employment	109,980	110,420	110,192	110,432	110,637	205
Unemployment	8,191	8,138	8,222	8,243	7,949	-294
Not in labor force	62,664	62,807	62,772	62,688	62,961	273
Discouraged workers	1,150	1,127	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	6.8	6.8	6.8	6.8	6.6	-0.2
All civilian workers	6.9	6.9	6.9	6.9	6.7	-.2
Adult men	6.1	6.1	6.2	6.2	6.0	-.2
Adult women	6.1	6.0	6.1	6.1	5.9	-.2
Teenagers	18.1	17.8	17.7	18.2	17.3	-.9
White	6.0	6.0	6.0	6.0	5.8	-.2
Black	14.5	14.1	14.3	14.2	13.7	-.5
Hispanic origin	10.8	10.2	10.4	9.6	10.5	.9
ESTABLISHMENT DATA						
	Thousands of jobs					
Nonfarm employment	100,316	p101,075	100,826	p101,065	p101,334	p269
Goods-producing	24,872	p24,897	24,865	p24,895	p24,932	p37
Service-producing	75,444	p76,178	75,961	p76,170	p76,402	p232
	Hours of work					
Average weekly hours:						
Total private	34.7	p34.7	34.7	p34.8	p34.6	p-0.2
Manufacturing	40.7	p40.8	40.7	p40.8	p40.9	p.1
Overtime	3.5	p3.5	3.5	p3.5	p3.6	p.1

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.
NOTE: Household data have been revised based on the experience through December 1986.

accounting for 55 percent of the increase. (All yearly comparisons are adjusted for changes in the underlying population estimates introduced in January 1986.)

The civilian labor force was about unchanged at 118.6 million in December, after seasonal adjustment. Over the past year, the labor force rose by 1.9 million. (See table A-2.)

Discouraged Workers (Household Survey Data)

In the fourth quarter of 1986, there were 1.1 million discouraged workers--persons who wanted to work but did not look for jobs because they believed that they could not find any. Their number has been essentially unchanged for more than a year. Seventy-five percent of the discouraged workers cited job-market conditions as their reason for not looking, while the remainder cited personal factors. Blacks continued to make up a disproportionately large share (26 percent) of all discouraged workers. (See table A-14.)

Industry Payroll Employment (Establishment Survey Data)

Total nonagricultural payroll employment rose by 270,000 in December, seasonally adjusted, to a level of 101.3 million. For the second month in a row, increases occurred in about three-fifths of the 185 industries in the BLS index of diffusion. (See tables B-1 and B-6.)

The service-producing sector accounted for almost all of the over-the-month job growth, as it has for most months over the past year. The services industry itself posted another large monthly increase--140,000. This industry has accounted for 44 percent of the 2.4 million over-the-year expansion in payroll jobs, largely because of the rapid growth in its business and health services components. Employment also rose over the month in finance, insurance, and real estate. Over the past year, this rapidly growing industry has added 370,000 jobs, a 6 percent increase. Employment in transportation and public utilities, wholesale trade, retail trade, and government were all little changed over the month, after seasonal adjustment.

In the goods-producing sector, manufacturing employment edged up for the third month in a row in December. Since September, manufacturing employment has increased by 85,000, regaining almost half the jobs lost in the first 9 months of the year. Employment in construction was little changed, continuing the recent pattern. In mining, there was a further, although small, job decline in the oil and gas extraction industry, following 2 months of relatively stable employment.

Weekly Hours (Establishment Survey Data)

Average weekly hours of production or nonsupervisory workers on private nonagricultural payrolls were 34.6, down 0.2 hour, after seasonal adjustment. In manufacturing, however, both the average workweek and overtime hours edged up by a tenth of an hour. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls declined by 0.3 percent to 119.0 (1977=100), after seasonal adjustment. The factory index rose by 0.4 percent to 93.6. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings were about unchanged in December, and average weekly earnings declined 0.7 percent, seasonally adjusted. Prior to seasonal adjustment, average hourly earnings slipped 1 cent to $8.85, while average weekly earnings increased by $1.43 to $308.87. Over the past year, average hourly earnings have risen by 14 cents, and average weekly earnings were up $2.28. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 170.8 (1977=100) in December, seasonally adjusted, a decrease of 0.1 percent from November. For the 12 months ended in December, the increase was 1.8 percent. The HEI excludes the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. In dollars of constant purchasing power, the HEI increased 1.5 percent during the 12-month period ended in November. (See table B-4.)

The Employment Situation for January 1987 will be released on Friday, February 6, at 8:30 A.M. (EST).

Revisions of Seasonally Adjusted Household Survey Data

At the end of each calendar year, the BLS routinely revises the seasonally adjusted labor force series derived from the Current Population Survey (household survey) to incorporate the experience of that year. As a result of the recalculation of the seasonal factors, seasonally adjusted data for the most recent 5 years are subject to revision. (Establishment data are similarly revised concurrent with annual benchmark adjustments about mid-year.)

Table B summarizes the effects of the revisions on the overall and civilian worker unemployment rates in 1986. The 1986 annual averages, 6.9 percent for all workers and 7.0 percent for civilian workers, are, of course, not affected by seasonal adjustment revisions. Table C presents revised seasonally adjusted data for major civilian labor force series for December 1985 through December 1986.

The January 1987 issue of Employment and Earnings will contain the new seasonal adjustment factors that will be used to calculate the civilian labor force and other major series for January-June of 1987, a description of the current seasonal adjustment methodology, and revised data for the most recent 13 months or calendar quarters for all regularly published tables containing seasonally adjusted household survey data. Revised monthly data for the entire 1982-86 revision period for 425 labor force series will be published in the February 1987 issue. Historical seasonally adjusted data (monthly and quarterly) may be purchased from the Bureau. (Contact Gloria P. Green, (202) 523-1959.)

Table B. Seasonally adjusted unemployment rates in 1986 and change due to revision

Month	As first computed		As revised		Change due to revision	
	Overall	Civilian	Overall	Civilian	Overall	Civilian
January........	6.6	6.7	6.7	6.8	0.1	0.1
February.......	7.2	7.3	7.1	7.2	-.1	-.1
March..........	7.1	7.2	7.0	7.2	-.1	0
April..........	7.0	7.1	7.0	7.1	0	0
May............	7.2	7.3	7.1	7.2	-.1	-.1
June...........	7.0	7.1	7.0	7.1	0	0
July...........	6.8	6.9	6.9	7.0	.1	.1
August.........	6.7	6.8	6.7	6.8	0	0
September......	6.9	7.0	6.9	7.0	0	0
October........	6.9	7.0	6.8	6.9	-.1	-.1
November.......	6.9	7.0	6.8	6.9	-.1	-.1
December.......	*6.5	*6.6	6.6	6.7	.1	.1

* Not published.

Table C. Employment status of the civilian noninstitutional population by sex and age, seasonally adjusted

(Numbers in thousands)

Employment status, sex, and age	1985	1986											
	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
TOTAL													
Civilian noninstitutional population1/	179,112	179,670	179,821	179,985	180,148	180,311	180,503	180,682	180,828	180,997	181,186	181,363	181,547
Civilian labor force	116,333	116,794	117,042	117,187	117,292	117,587	118,005	118,117	118,124	118,272	118,414	118,675	118,586
Percent of population	64.9	65.0	65.1	65.1	65.1	65.2	65.4	65.4	65.3	65.3	65.4	65.4	65.3
Employed	108,149	108,892	108,557	108,807	108,969	109,165	109,613	109,887	110,067	109,987	110,192	110,432	110,637
Employment-population ratio2/	60.4	60.5	60.4	60.5	60.5	60.5	60.7	60.8	60.9	60.8	60.8	60.9	60.9
Unemployed	8,184	7,902	8,485	8,380	8,323	8,422	8,392	8,230	8,057	8,285	8,222	8,243	7,949
Unemployment rate	7.0	6.8	7.2	7.2	7.1	7.2	7.1	7.0	6.8	7.0	6.9	6.9	6.7
Men, 20 years and over													
Civilian noninstitutional population1/	77,651	78,101	78,171	78,236	78,309	78,387	78,484	78,586	78,634	78,722	78,802	78,876	78,973
Civilian labor force	60,545	61,143	61,092	61,177	61,080	61,158	61,330	61,355	61,219	61,412	61,409	61,703	61,826
Percent of population	78.0	78.3	78.2	78.2	78.0	78.0	78.1	78.1	77.9	78.0	77.9	78.2	78.3
Employed	56,928	57,599	57,296	57,388	57,392	57,338	57,522	57,544	57,585	57,607	57,595	57,883	58,101
Employment-population ratio2/	73.3	73.7	73.3	73.4	73.3	73.1	73.3	73.2	73.2	73.2	73.1	73.4	73.6
Agriculture	2,280	2,340	2,261	2,389	2,319	2,279	2,309	2,275	2,185	2,286	2,297	2,303	2,289
Nonagricultural industries	54,648	55,259	55,035	54,999	55,073	55,059	55,213	55,269	55,400	55,321	55,298	55,580	55,812
Unemployed	3,617	3,544	3,796	3,789	3,688	3,820	3,808	3,811	3,634	3,805	3,814	3,820	3,725
Unemployment rate	6.0	5.8	6.2	6.2	6.0	6.2	6.2	6.2	5.9	6.2	6.2	6.2	6.0
Not in labor force	17,106	16,958	17,079	17,059	17,229	17,229	17,154	17,231	17,415	17,310	17,393	17,171	17,147
Women, 20 years and over													
Civilian noninstitutional population1/	86,988	87,112	87,183	87,263	87,355	87,444	87,547	87,629	87,689	87,779	87,856	87,933	88,016
Civilian labor force	47,916	47,897	48,009	48,065	48,181	48,433	48,739	48,879	48,950	48,920	49,014	49,043	48,923
Percent of population	55.1	55.0	55.1	55.1	55.2	55.4	55.7	55.8	55.8	55.7	55.8	55.8	55.6
Employed	44,843	44,952	44,820	44,934	45,094	45,335	45,657	45,869	45,956	45,905	46,020	46,067	46,058
Employment-population ratio2/	51.6	51.6	51.4	51.5	51.6	51.8	52.2	52.3	52.4	52.3	52.4	52.4	52.3
Agriculture	594	677	591	589	585	604	583	607	622	614	612	675	621
Nonagricultural industries	44,249	44,275	44,229	44,345	44,509	44,731	45,074	45,262	45,334	45,291	45,408	45,392	45,437
Unemployed	3,073	2,945	3,189	3,131	3,087	3,098	3,082	3,010	2,994	3,015	2,994	2,976	2,865
Unemployment rate	6.4	6.1	6.6	6.5	6.4	6.4	6.3	6.2	6.1	6.2	6.1	6.1	5.9
Not in labor force	39,072	39,215	39,176	39,198	39,174	39,011	38,808	38,750	38,739	38,859	38,842	38,890	39,093
Both sexes, 16 to 19 years													
Civilian noninstitutional population1/	14,474	14,458	14,465	14,485	14,484	14,480	14,472	14,467	14,505	14,496	14,527	14,557	14,558
Civilian labor force	7,872	7,754	7,941	7,945	8,031	7,996	7,936	7,883	7,955	7,960	7,991	7,929	7,837
Percent of population	54.4	53.6	54.9	54.9	55.4	55.2	54.8	54.5	54.8	54.8	55.0	54.5	53.8
Employed	6,378	6,341	6,441	6,485	6,483	6,492	6,434	6,474	6,526	6,475	6,577	6,482	6,478
Employment-population ratio2/	44.1	43.9	44.5	44.8	44.8	44.8	44.5	44.8	45.0	44.7	45.3	44.5	44.5
Agriculture	277	263	253	274	295	268	272	242	250	242	253	237	251
Nonagricultural industries	6,101	6,078	6,188	6,211	6,188	6,224	6,162	6,232	6,276	6,233	6,324	6,245	6,227
Unemployed	1,494	1,413	1,500	1,460	1,548	1,504	1,502	1,409	1,429	1,465	1,414	1,447	1,359
Unemployment rate	19.0	18.2	18.9	18.4	19.3	18.8	18.9	17.9	18.0	18.5	17.7	18.2	17.3
Not in labor force	6,602	6,704	6,524	6,540	6,453	6,484	6,536	6,584	6,550	6,556	6,536	6,628	6,721

1/ The population figures are not adjusted for seasonal variation.

2/ Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Data have been revised based on the experience through December 1986.

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes 250,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. At the time the first half year's factors are calculated (upon availability of data for December), historical data for the previous 5-year period are subject to revision. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $4.50 per issue or $31.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Dec. 1985	Nov. 1986	Dec. 1986	Dec. 1985	Aug. 1986	Sept 1986	Oct. 1986	Nov. 1986	Dec. 1986
TOTAL									
Noninstitutional population[1]	180,810	183,114	183,297	180,810	182,525	182,713	182,935	183,114	183,297
Labor force[2]	117,478	120,374	119,799	118,031	119,821	119,988	120,163	120,426	120,336
Participation rate[3]	65.0	65.7	65.4	65.3	65.6	65.7	65.7	65.8	65.7
Total employed[2]	109,761	112,502	112,338	109,847	111,764	111,703	111,941	112,183	112,387
Employment-population ratio[4]	60.7	61.4	61.3	60.8	61.2	61.1	61.2	61.3	61.3
Resident Armed Forces	1,698	1,751	1,750	1,698	1,697	1,716	1,749	1,751	1,750
Civilian employed	108,063	110,751	110,588	108,149	110,067	109,987	110,192	110,432	110,637
Agriculture	2,809	3,078	2,826	3,151	3,057	3,142	3,162	3,215	3,161
Nonagricultural industries	105,254	107,673	107,762	104,998	107,010	106,845	107,030	107,217	107,476
Unemployed	7,717	7,872	7,461	8,184	8,057	8,285	8,222	8,243	7,949
Unemployment rate[5]	6.6	6.5	6.2	6.9	6.7	6.9	6.8	6.8	6.6
Not in labor force	63,332	62,740	63,498	62,779	62,704	62,725	62,772	62,688	62,961
Men, 16 years and over									
Noninstitutional population[1]	86,459	87,773	87,868	86,459	87,460	87,556	87,682	87,773	87,868
Labor force[2]	65,698	67,108	66,950	66,173	66,911	67,128	67,130	67,407	67,425
Participation rate[3]	76.0	76.5	76.2	76.5	76.5	76.7	76.6	76.8	76.7
Total employed[2]	61,324	62,747	62,568	61,762	62,483	62,528	62,565	62,833	62,986
Employment-population ratio[4]	70.9	71.5	71.2	71.4	71.4	71.4	71.4	71.6	71.7
Resident Armed Forces	1,549	1,592	1,593	1,549	1,541	1,560	1,590	1,592	1,593
Civilian employed	59,775	61,155	60,975	60,213	60,942	60,968	60,975	61,241	61,393
Unemployed	4,374	4,360	4,382	4,411	4,428	4,600	4,565	4,574	4,439
Unemployment rate[5]	6.7	6.5	6.5	6.7	6.6	6.9	6.8	6.8	6.6
Women, 16 years and over									
Noninstitutional population[1]	94,351	95,341	95,429	94,351	95,065	95,156	95,253	95,341	95,429
Labor force[2]	51,780	53,267	52,849	51,858	52,910	52,860	53,033	53,019	52,911
Participation rate[3]	54.9	55.9	55.4	55.0	55.7	55.6	55.7	55.6	55.4
Total employed[2]	48,437	49,754	49,770	48,085	49,281	49,175	49,376	49,350	49,401
Employment-population ratio[4]	51.3	52.2	52.2	51.0	51.8	51.7	51.8	51.8	51.8
Resident Armed Forces	149	159	157	149	156	156	159	159	157
Civilian employed	48,288	49,595	49,613	47,936	49,125	49,019	49,217	49,191	49,244
Unemployed	3,344	3,512	3,079	3,773	3,629	3,685	3,657	3,669	3,510
Unemployment rate[5]	6.5	6.6	5.8	7.3	6.9	7.0	6.9	6.9	6.6

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[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

NOTE: Seasonally adjusted data have been revised based on the experience through December 1986.

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Dec. 1985	Nov. 1986	Dec. 1986	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986
TOTAL									
Civilian noninstitutional population	179,112	181,363	181,547	179,112	180,828	180,997	181,186	181,363	181,547
Civilian labor force	115,780	118,623	118,049	116,333	118,124	118,272	118,414	118,675	118,586
Participation rate	64.6	65.4	65.0	64.9	65.3	65.3	65.4	65.4	65.3
Employed	108,063	110,751	110,588	108,149	110,067	109,987	110,192	110,432	110,637
Employment-population ratio[2]	60.3	61.1	60.9	60.4	60.9	60.8	60.8	60.9	60.9
Unemployed	7,717	7,872	7,461	8,184	8,057	8,285	8,222	8,243	7,949
Unemployment rate	6.7	6.6	6.3	7.0	6.8	7.0	6.9	6.9	6.7
Men, 20 years and over									
Civilian noninstitutional population	77,651	78,874	78,973	77,651	78,634	78,722	78,802	78,874	78,973
Civilian labor force	60,379	61,654	61,665	60,545	61,219	61,412	61,409	61,703	61,826
Participation rate	77.8	78.2	78.1	78.0	77.9	78.0	77.9	78.2	78.3
Employed	56,767	58,019	57,959	56,928	57,585	57,607	57,595	57,883	58,101
Employment-population ratio[2]	73.1	73.6	73.4	73.3	73.2	73.2	73.1	73.4	73.6
Agriculture	2,115	2,263	2,128	2,280	2,185	2,286	2,297	2,303	2,289
Nonagricultural industries	54,652	55,755	55,831	54,648	55,400	55,321	55,298	55,580	55,812
Unemployed	3,612	3,636	3,706	3,617	3,634	3,805	3,814	3,820	3,725
Unemployment rate	6.0	5.9	6.0	6.0	5.9	6.2	6.2	6.2	6.0
Women, 20 years and over									
Civilian noninstitutional population	86,988	87,933	88,016	86,988	87,689	87,779	87,856	87,933	88,016
Civilian labor force	48,030	49,458	49,057	47,916	48,950	48,920	49,014	49,043	48,923
Participation rate	55.2	56.2	55.7	55.1	55.8	55.7	55.8	55.8	55.6
Employed	45,274	46,597	46,512	44,843	45,956	45,905	46,020	46,067	46,058
Employment-population ratio[2]	52.0	53.0	52.8	51.6	52.4	52.3	52.4	52.4	52.3
Agriculture	521	640	545	594	622	614	612	675	621
Nonagricultural industries	44,752	45,958	45,966	44,249	45,334	45,291	45,408	45,392	45,437
Unemployed	2,757	2,860	2,546	3,073	2,994	3,015	2,994	2,976	2,865
Unemployment rate	5.7	5.8	5.2	6.4	6.1	6.2	6.1	6.1	5.9
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,474	14,557	14,558	14,474	14,505	14,496	14,527	14,557	14,558
Civilian labor force	7,370	7,511	7,327	7,872	7,955	7,940	7,991	7,929	7,837
Participation rate	50.9	51.6	50.3	54.4	54.8	54.8	55.0	54.5	53.8
Employed	6,022	6,135	6,117	6,378	6,526	6,475	6,577	6,482	6,478
Employment-population ratio[2]	41.6	42.1	42.0	44.1	45.0	44.7	45.3	44.5	44.5
Agriculture	172	174	153	277	250	242	253	237	251
Nonagricultural industries	5,850	5,960	5,964	6,101	6,276	6,233	6,324	6,245	6,227
Unemployed	1,349	1,376	1,209	1,494	1,429	1,465	1,414	1,447	1,359
Unemployment rate	18.3	18.3	16.5	19.0	18.0	18.5	17.7	18.2	17.3

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Seasonally adjusted data have been revised based on the experience through December 1986.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Dec. 1985	Nov. 1986	Dec. 1986	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986
WHITE									
Civilian noninstitutional population	154,327	155,979	156,111	154,327	155,604	155,723	155,856	155,979	156,111
Civilian labor force	100,090	102,455	101,983	100,617	102,122	102,158	102,297	102,455	102,503
Participation rate	64.9	65.7	65.3	65.2	65.6	65.6	65.6	65.7	65.7
Employed	94,385	96,555	96,388	94,549	96,177	96,000	96,147	96,281	96,533
Employment-population ratio[2]	61.2	61.9	61.7	61.3	61.8	61.6	61.7	61.7	61.8
Unemployed	5,704	5,899	5,596	6,068	5,945	6,158	6,150	6,174	5,970
Unemployment rate	5.7	5.8	5.5	6.0	5.8	6.0	6.0	6.0	5.8
Men, 20 years and over									
Civilian labor force	52,902	53,930	53,970	53,106	53,583	53,727	53,757	54,015	54,172
Participation rate	78.1	78.5	78.5	78.4	78.2	78.4	78.3	78.7	78.8
Employed	50,169	51,163	51,094	50,374	50,877	50,845	50,845	51,089	51,286
Employment-population ratio[2]	74.1	74.5	74.3	74.4	74.3	74.2	74.1	74.4	74.6
Unemployed	2,733	2,768	2,876	2,732	2,706	2,882	2,912	2,926	2,886
Unemployment rate	5.2	5.1	5.3	5.1	5.1	5.4	5.4	5.4	5.3
Women, 20 years and over									
Civilian labor force	40,789	41,951	41,619	40,699	41,640	41,547	41,598	41,540	41,514
Participation rate	54.6	55.6	55.2	54.5	55.4	55.2	55.2	55.1	55.0
Employed	38,795	39,893	39,808	38,453	39,466	39,365	39,431	39,399	39,456
Employment-population ratio[2]	51.9	52.9	52.8	51.4	52.5	52.3	52.3	52.3	52.3
Unemployed	1,994	2,058	1,812	2,246	2,174	2,182	2,167	2,141	2,058
Unemployment rate	4.9	4.9	4.4	5.5	5.2	5.3	5.2	5.2	5.0
Both sexes, 16 to 19 years									
Civilian labor force	6,399	6,573	6,394	6,812	6,899	6,884	6,942	6,900	6,817
Participation rate	53.9	55.2	53.8	57.4	58.1	57.9	58.4	58.0	57.3
Employed	5,422	5,500	5,486	5,722	5,834	5,790	5,871	5,793	5,791
Employment-population ratio[2]	45.7	46.2	46.1	48.2	49.1	48.7	49.4	48.7	48.7
Unemployed	977	1,073	908	1,090	1,065	1,094	1,071	1,107	1,026
Unemployment rate	15.3	16.3	14.2	16.0	15.4	15.9	15.4	16.0	15.1
Men	17.1	16.8	16.1	16.4	16.6	16.6	15.7	16.3	15.5
Women	13.3	15.8	12.3	15.6	14.2	15.1	15.2	15.7	14.6
BLACK									
Civilian noninstitutional population	19,819	20,120	20,152	19,819	20,028	20,056	20,089	20,120	20,152
Civilian labor force	12,445	12,695	12,598	12,559	12,553	12,652	12,720	12,719	12,707
Participation rate	62.8	63.1	62.5	63.4	62.7	63.1	63.3	63.2	63.1
Employed	10,681	10,946	10,980	10,679	10,716	10,799	10,895	10,910	10,968
Employment-population ratio[2]	53.9	54.4	54.5	53.9	53.5	53.8	54.2	54.2	54.4
Unemployed	1,764	1,749	1,618	1,880	1,837	1,853	1,825	1,809	1,739
Unemployment rate	14.2	13.8	12.8	15.0	14.6	14.6	14.3	14.2	13.7
Men, 20 years and over									
Civilian labor force	5,796	5,951	5,932	5,813	5,885	5,906	5,932	5,934	5,947
Participation rate	74.2	74.8	74.3	74.4	74.2	74.4	74.6	74.5	74.5
Employed	5,044	5,209	5,249	5,044	5,110	5,116	5,153	5,171	5,244
Employment-population ratio[2]	64.6	65.4	65.8	64.6	64.5	64.5	64.8	65.0	65.7
Unemployed	752	742	683	769	775	790	779	763	703
Unemployment rate	13.0	12.5	11.5	13.2	13.2	13.4	13.1	12.9	11.8
Women, 20 years and over									
Civilian labor force	5,835	5,977	5,908	5,842	5,841	5,872	5,909	5,943	5,907
Participation rate	59.2	59.7	58.9	59.2	58.6	58.8	59.1	59.3	58.9
Employed	5,169	5,238	5,251	5,108	5,112	5,145	5,178	5,200	5,182
Employment-population ratio[2]	52.4	52.3	52.4	51.8	51.3	51.5	51.8	51.9	51.7
Unemployed	667	738	657	736	729	727	731	743	725
Unemployment rate	11.4	12.4	11.1	12.6	12.5	12.4	12.4	12.5	12.3
Both sexes, 16 to 19 years									
Civilian labor force	814	767	758	904	827	874	879	842	853
Participation rate	37.9	35.8	35.4	42.1	38.8	40.9	41.1	39.3	39.8
Employed	469	499	480	527	494	538	564	539	542
Employment-population ratio[2]	21.8	23.3	22.4	24.5	23.1	25.2	26.3	25.1	25.3
Unemployed	345	269	279	377	333	336	315	303	311
Unemployment rate	42.4	35.0	36.8	41.7	40.3	38.4	35.8	36.0	36.5
Men	43.4	35.6	38.3	40.9	38.8	38.6	37.8	35.0	36.1
Women	41.2	34.5	35.2	42.7	41.9	38.3	33.8	37.0	36.9
HISPANIC ORIGIN									
Civilian noninstitutional population	12,111	12,505	12,540	12,111	12,397	12,432	12,469	12,505	12,540
Civilian labor force	7,694	8,253	8,235	7,777	8,130	8,179	8,200	8,226	8,320
Participation rate	63.5	66.0	65.7	64.2	65.6	65.8	65.8	65.8	66.3
Employed	6,923	7,476	7,406	6,964	7,248	7,286	7,345	7,437	7,446
Employment-population ratio[2]	57.2	59.8	59.1	57.5	58.5	58.6	58.9	59.5	59.4
Unemployed	772	777	829	813	882	893	855	789	874
Unemployment rate	10.0	9.4	10.1	10.5	10.8	10.9	10.4	9.6	10.5

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups. Seasonally adjusted data have been revised based on the experience through December 1986.

Table A-4. Selected employment indicators

(Numbers in thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Dec. 1985	Nov. 1986	Dec. 1986	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986
CHARACTERISTIC									
Civilian employed, 16 years and over	108,063	110,751	110,588	108,149	110,067	109,987	110,192	110,432	110,637
Married men, spouse present	39,194	40,099	40,055	39,254	39,735	39,691	39,780	39,952	40,093
Married women, spouse present	27,242	27,954	27,895	26,777	27,388	27,249	27,323	27,333	27,400
Women who maintain families	5,659	5,965	5,965	5,697	5,832	5,926	6,016	6,041	6,005
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,336	1,489	1,417	1,545	1,509	1,521	1,562	1,582	1,621
Self-employed workers	1,341	1,410	1,292	1,447	1,387	1,460	1,451	1,425	1,400
Unpaid family workers	131	179	117	168	174	159	164	198	152
Nonagricultural industries:									
Wage and salary workers	97,160	99,127	99,430	96,712	98,586	98,692	98,846	98,869	99,164
Government	16,315	16,602	16,588	16,177	16,446	16,333	16,264	16,457	16,443
Private industries	80,844	82,526	82,842	80,735	82,140	82,359	82,582	82,412	82,721
Private households	1,122	1,145	1,167	1,141	1,247	1,229	1,216	1,183	1,189
Other industries	79.722	81,381	81,675	79,594	80,893	81,130	81,366	81,229	81,532
Self-employed workers	7,837	8,292	8,088	7,817	7,956	7,939	7,993	8,179	8,056
Unpaid family workers	257	254	243	254	271	275	265	252	239
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,402	5,414	5,494	5,505	5,471	5,544	5,740	5,563	5.596
Slack work	2,424	2,563	2,506	2,365	2,417	2,472	2,481	2,510	2,444
Could only find part-time work	2,718	2,546	2,758	2,838	2,741	2,772	2,826	2,714	2,867
Voluntary part time	14,587	15,185	14,805	13,640	13,981	13,922	14,178	14,021	13,877
Nonagricultural industries:									
Part time for economic reasons	5,172	5,176	5,226	5,292	5,269	5,303	5,450	5,319	5,342
Slack work	2,256	2,409	2,313	2.233	2,283	2,314	2,314	2,366	2,286
Could only find part-time work	2,655	2,478	2,689	2,740	2,678	2,710	2,739	2,626	2,765
Voluntary part time	14,204	14,759	14,449	13,196	13,606	13,520	13,736	13,567	13 455

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

NOTE: Seasonally adjusted data have been revised based on the experience through December 1986.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

	Measure	Quarterly averages					Monthly data		
		1985	1986				1986		
		IV	I	II	III	IV	Oct.	Nov.	Dec.
U-1	Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.8
U-2	Job losers as a percent of the civilian labor force	3.5	3.5	3.5	3.4	3.3	3.4	3.3	3.3
U-3	Unemployed persons 25 years and over as a percent of the civilian labor force	5.4	5.5	5.5	5.4	5.4	5.5	5.5	5.2
U-4	Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.7	6.7	6.8	6.6	6.5	6.6	6.6	6.3
U-5a	**Total unemployed as a percent of the labor force, including the resident Armed Forces**	7.0	7.0	7.0	6.8	6.8	6.8	6.8	6.6
U-5b	**Total unemployed as a percent of the civilian labor force**	7.1	7.1	7.1	6.9	6.9	6.9	6.9	6.7
U-6	Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.5	9.4	9.6	9.3	9.2	9.4	9.3	9.1
U-7	Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.4	10.4	10.5	10.2	10.2	N.A.	N.A.	N.A.

N.A = not available.

NOTE: Data have been revised based on the experience through December 1986.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Dec. 1985	Nov. 1986	Dec. 1986	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986
CHARACTERISTIC									
Total, 16 years and over	8,184	8,243	7,949	7.0	6.8	7.0	6.9	6.9	6.7
Men, 16 years and over	4,411	4,574	4,439	6.8	6.8	7.0	7.0	6.9	6.7
Men, 20 years and over	3,617	3,820	3,725	6.0	5.9	6.2	6.2	6.2	6.0
Women, 16 years and over	3,773	3,669	3,510	7.3	6.9	7.0	6.9	6.9	6.7
Women, 20 years and over	3,073	2,976	2,865	6.4	6.1	6.2	6.1	6.1	5.9
Both sexes, 16 to 19 years	1,494	1,447	1,359	19.0	18.0	18.5	17.7	18.2	17.3
Married men, spouse present	1,766	1,862	1,822	4.3	4.2	4.3	4.6	4.5	4.3
Married women, spouse present	1,514	1,429	1,378	5.4	5.1	5.1	5.0	5.0	4.8
Women who maintain families	606	650	656	9.6	10.1	9.8	8.9	9.7	9.8
Full-time workers	6,668	6,673	6,465	6.7	6.4	6.6	6.6	6.6	6.3
Part-time workers	1,498	1,538	1,459	9.1	9.3	9.3	9.2	9.1	8.8
Labor force time lost[2]	--	--	--	7.9	7.7	7.9	7.8	7.7	7.6
INDUSTRY									
Nonagricultural private wage and salary workers	6,098	6,190	5,989	7.0	6.9	7.0	7.0	7.0	6.8
Mining	103	136	133	10.2	16.6	13.9	14.5	14.5	14.1
Construction	764	955	834	12.6	12.4	12.9	13.8	15.1	13.7
Manufacturing	1,603	1,541	1,504	7.3	6.9	7.0	7.3	7.1	6.9
Durable goods	965	860	841	7.3	6.8	6.5	7.2	6.6	6.4
Nondurable goods	638	681	663	7.3	6.9	7.7	7.3	7.9	7.7
Transportation and public utitities	320	272	290	5.1	4.8	4.7	5.2	4.4	4.6
Wholesale and retail trade	1,712	1,621	1,632	7.7	7.5	7.6	7.4	7.2	7.2
Finance and service industries	1,596	1,665	1,596	5.4	5.6	5.6	5.4	5.4	5.1
Government workers	652	611	569	3.9	3.3	3.5	3.7	3.6	3.3
Agricultural wage and salary workers	185	177	211	10.7	13.3	12.9	11.9	10.1	11.5

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

NOTE: Data have been revised based on the experience through December 1986.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Dec. 1985	Nov. 1986	Dec. 1986	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986
DURATION									
Less than 5 weeks	3,053	3,281	2,972	3,417	3,436	3,415	3,418	3,382	3,355
5 to 14 weeks	2,577	2,597	2,443	2,507	2,407	2,524	2,563	2,613	2,389
15 weeks and over	2,088	1,994	2,046	2,209	2,272	2,373	2,168	2,217	2,171
15 to 26 weeks	943	914	954	1,005	1,068	1,110	950	1,045	1,023
27 weeks and over	1,145	1,080	1,092	1,204	1,204	1,263	1,218	1,172	1,148
Average (mean) duration, in weeks	15.5	15.0	15.4	15.2	15.6	15.5	15.2	14.8	15.0
Median duration, in weeks	7.2	6.8	7.5	6.8	7.1	7.1	7.0	7.0	7.1
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	39.6	41.7	39.8	42.0	42.3	41.1	41.9	41.2	42.4
5 to 14 weeks	33.4	33.0	32.7	30.8	29.7	30.4	31.5	31.8	30.2
15 weeks and over	27.1	25.3	27.4	27.2	28.0	28.5	26.6	27.0	27.4
15 to 26 weeks	12.2	11.6	12.8	12.4	13.2	13.4	11.7	12.7	12.9
27 weeks and over	14.8	13.7	14.6	14.8	14.8	15.2	14.9	14.3	14.5

NOTE: Seasonally adjusted data have been revised based on the experience through December 1986.

Table A-8. Reason for unemployment

(Numbers in thousands)

Reason	Not seasonally adjusted			Seasonally adjusted					
	Dec. 1985	Nov. 1986	Dec. 1986	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986
NUMBER OF UNEMPLOYED									
Job losers	4,063	3,773	3,936	3,996	3,824	4,044	3,984	3,947	3,890
On layoff	1,190	986	1,126	1,135	1,017	1,029	1,072	1,073	1,078
Other job losers	2,873	2,787	2,810	2,861	2,807	3,015	2,912	2,874	2,812
Job leavers	813	1,090	929	982	990	1,041	1,027	1,056	1,036
Reentrants	2,010	2,035	1,795	2,251	2,199	2,145	2,198	2,119	2,019
New entrants	832	975	801	1,042	1,014	1,038	972	1,076	1,015
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	52.6	47.9	52.0	48.8	47.6	48.9	48.7	48.1	48.9
On layoff	15.4	12.5	15.1	13.9	12.7	12.4	13.1	13.1	13.5
Other job losers	37.2	35.4	37.7	34.9	35.0	36.5	35.6	35.1	35.3
Job leavers	10.5	13.8	12.5	11.0	12.3	12.6	12.6	12.9	13.0
Reentrants	26.0	25.8	24.1	27.5	27.4	25.9	26.8	25.8	25.4
New entrants	10.8	12.4	10.7	12.7	12.6	12.6	11.9	13.1	12.8
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	3.5	3.1	3.4	3.4	3.2	3.4	3.4	3.3	3.3
Job leavers	.7	.9	.8	.8	.8	.9	.9	.9	.9
Reentrants	1.7	1.7	1.5	1.9	1.9	1.8	1.8	1.8	1.7
New entrants	.7	.8	.7	.9	.9	.9	.8	.9	.9

NOTE: Seasonally adjusted data have been revised based on the experience through December 1986.

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Dec. 1985	Nov. 1986	Dec. 1985	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986
Total, 16 years and over	8,184	8,243	7,949	7.0	6.8	7.0	6.9	6.9	6.7
16 to 24 years	3,159	3,005	2,986	13.4	12.9	13.6	13.0	12.9	12.9
16 to 19 years	1,494	1,447	1,359	19.0	18.0	18.5	17.7	18.2	17.3
16 to 17 years	668	686	629	21.2	19.8	20.0	19.3	20.6	18.8
18 to 19 years	833	768	737	17.6	16.8	17.2	16.5	16.7	16.3
20 to 24 years	1,665	1,558	1,627	10.7	10.3	11.1	10.5	10.2	10.7
25 years and over	5,034	5,230	4,961	5.4	5.4	5.4	5.5	5.5	5.2
25 to 54 years	4,417	4,630	4,422	5.7	5.7	5.6	5.7	5.8	5.5
55 years and over	585	571	527	3.9	3.7	4.0	4.1	3.8	3.5
Men, 16 years and over	4,411	4,574	4,439	6.8	6.8	7.0	7.0	6.9	6.7
16 to 24 years	1,675	1,635	1,623	13.6	13.3	14.3	13.2	13.4	13.4
16 to 19 years	794	754	714	19.5	19.1	19.1	18.2	18.3	17.8
16 to 17 years	362	366	325	21.8	20.9	21.0	19.8	21.3	19.1
18 to 19 years	437	388	395	18.0	18.0	17.5	17.0	16.2	17.0
20 to 24 years	881	881	909	10.7	10.3	11.9	10.7	10.9	11.3
25 years and over	2,730	2,931	2,809	5.2	5.3	5.4	5.5	5.5	5.2
25 to 54 years	2,383	2,568	2,462	5.5	5.6	5.5	5.7	5.7	5.5
55 years and over	346	361	351	3.9	4.1	4.2	4.4	4.1	4.0
Women, 16 years and over	3,773	3,669	3,510	7.3	6.9	7.0	6.9	6.9	6.7
16 to 24 years	1,484	1,370	1,363	13.2	12.4	12.8	12.7	12.4	12.4
16 to 19 years	700	693	645	18.5	16.7	17.7	17.2	18.2	16.8
16 to 17 years	306	320	304	20.5	18.7	18.8	18.6	19.8	18.4
18 to 19 years	396	380	342	17.2	15.4	16.9	16.0	17.2	15.7
20 to 24 years	784	677	718	10.6	10.2	10.2	10.3	9.4	10.0
25 years and over	2,304	2,299	2,152	5.7	5.4	5.5	5.4	5.5	5.2
25 to 54 years	2,034	2,062	1,960	5.9	5.8	5.8	5.7	5.8	5.5
55 years and over	239	210	176	3.9	3.3	3.6	3.6	3.4	2.9

[1] Unemployment as a percent of the civilian labor force.

NOTE: Data have been revised based on the experience through December 1986.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Dec. 1985	Nov. 1986	Dec. 1986	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986
Civilian noninstitutional population	24,785	25,385	25,436	24,785	25,224	25,274	25,330	25,385	25,436
Civilian labor force	15,690	16,169	16,065	15,786	15,957	16,072	16,148	16,192	16,157
Participation rate	63.3	63.7	63.2	63.7	63.3	63.6	63.8	63.8	63.5
Employed	13,677	14,195	14,200	13,655	13,861	13,964	14,097	14,137	14,170
Employment-population ratio[2]	55.2	55.9	55.8	55.1	55.0	55.3	55.7	55.7	55.7
Unemployed	2,013	1,973	1,865	2,131	2,096	2,108	2,051	2,055	1,987
Unemployment rate	12.8	12.2	11.6	13.5	13.1	13.1	12.7	12.7	12.3
Not in labor force	9,095	9,216	9,371	8,999	9,267	9,202	9,182	9,193	9,279

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Seasonally adjusted data have been revised based on the experience through December 1986.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Dec. 1985	Dec. 1986	Dec. 1985	Dec. 1986	Dec. 1985	Dec. 1986
Total, 16 years and over[1]	108,063	110,588	7,717	7,461	6.7	6.3
Managerial and professional specialty	26,231	27,325	548	584	2.0	2.1
Executive, administrative, and managerial	12,287	12,869	293	287	2.3	2.2
Professional specialty	13,943	14,457	255	297	1.8	2.0
Technical, sales, and administrative support	33,997	35,016	1,496	1,421	4.2	3.9
Technicians and related support	3,366	3,330	106	107	3.1	3.1
Sales occupations	13,036	13,853	645	586	4.7	4.1
Administrative support, including clerical	17,595	17,833	745	728	4.1	3.9
Service occupations	14,787	14,886	1,450	1,302	8.9	8.0
Private household	955	990	72	68	7.0	6.5
Protective service	1,800	1,872	100	116	5.3	5.8
Service, except private household and protective	12,031	12,024	1,278	1,117	9.6	8.5
Precision production, craft, and repair	13,176	13,449	1,022	963	7.2	6.7
Mechanics and repairers	4,383	4,282	245	236	5.3	5.2
Construction trades	4,826	4,925	519	482	9.7	8.9
Other precision production, craft, and repair	3,967	4,242	258	246	6.1	5.5
Operators, fabricators, and laborers	16,987	17,020	2,023	2,063	10.6	10.8
Machine operators, assemblers, and inspectors	7,933	7,689	907	876	10.3	10.2
Transportation and material moving occupations	4,479	4,652	448	446	9.1	8.8
Handlers, equipment cleaners, helpers, and laborers	4,575	4,679	669	741	12.8	13.7
Construction laborers	648	658	174	208	21.2	24.1
Other handlers, equipment cleaners, helpers, and laborers	3,927	4,021	495	533	11.2	11.7
Farming, forestry, and fishing	2,886	2,892	301	288	9.4	9.1

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Dec. 1985	Dec. 1986	Dec. 1985	Dec. 1986	Dec. 1985	Dec. 1986	Dec. 1935	Dec. 1986	Dec. 1985	Dec. 1986
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,675	7,792	7,158	7,256	6,768	6,901	390	355	5.4	4.9
30 to 44 years	6,426	6,314	6,179	6,043	5,835	5,721	344	322	5.6	5.3
30 to 34 years	1,293	1,045	1,241	990	1,138	911	103	79	8.3	8.0
35 to 39 years	3,181	2,857	3,074	2,746	2,900	2,602	174	144	5.7	5.2
40 to 44 years	1,952	2,412	1,864	2,307	1,797	2,208	67	99	3.6	4.3
45 years and over	1,249	1,478	979	1,213	933	1,180	46	33	4.7	2.7
NONVETERANS										
Total, 30 to 44 years	17,707	18,886	16,713	17,841	15,808	16,901	905	940	5.4	5.3
30 to 34 years	8,063	8,653	7,664	8,220	7,234	7,759	430	461	5.6	5.6
35 to 39 years	5,303	5,946	4,985	5,609	4,718	5,307	267	302	5.4	5.4
40 to 44 years	4,341	4,287	4,064	4,012	3,856	3,835	208	177	5.1	4.4

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted¹			Seasonally adjusted²					
	Dec. 1985	Nov. 1986	Dec. 1986	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986
California									
Civilian noninstitutional population	19,771	20,155	20,191	19,771	20,047	20,081	20,119	20,155	20,191
Civilian labor force	12,923	13,465	13,308	12,951	13,334	13,430	13,424	13,476	13,368
Employed	12,113	12,585	12,470	12,086	12,451	12,570	12,537	12,558	12,467
Unemployed	810	880	838	865	883	860	887	918	901
Unemployment rate	6.3	6.5	6.3	6.7	6.6	6.4	6.6	6.8	6.7
Florida									
Civilian noninstitutional population	9,017	9,244	9,266	9,017	9,181	9,202	9,223	9,244	9,266
Civilian labor force	5,391	5,694	5,710	5,380	5,613	5,540	5,656	5,708	5,704
Employed	5,091	5,375	5,446	5,081	5,277	5,204	5,348	5,387	5,437
Unemployed	300	319	263	299	336	336	308	321	267
Unemployment rate	5.6	5.6	4.6	5.6	6.0	6.1	5.4	5.6	4.7
Illinois									
Civilian noninstitutional population	8,658	8,683	8,686	8,658	8,675	8,677	8,680	8,683	8,686
Civilian labor force	5,659	5,644	5,626	5,685	5,732	5,760	5,695	5,639	5,646
Employed	5,187	5,251	5,235	5,187	5,266	5,283	5,270	5,222	5,231
Unemployed	472	392	391	498	466	477	425	417	415
Unemployment rate	8.3	6.9	7.0	8.8	8.1	8.3	7.5	7.4	7.4
Massachusetts									
Civilian noninstitutional population	4,566	4,599	4,603	4,566	4,590	4,593	4,596	4,599	4,603
Civilian labor force	3,061	3,079	3,085	3,060	3,119	3,083	3,069	3,059	3,084
Employed	2,943	2,967	2,989	2,936	2,998	2,955	2,950	2,930	2,983
Unemployed	118	112	96	124	121	128	119	129	101
Unemployment rate	3.9	3.6	3.1	4.1	3.9	4.2	3.9	4.2	3.3
Michigan									
Civilian noninstitutional population	6,821	6,871	6,877	6,821	6,857	6,861	6,866	6,871	6,877
Civilian labor force	4,355	4,463	4,470	4,417	4,348	4,369	4,440	4,479	4,508
Employed	4,026	4,104	4,130	4,072	3,992	3,978	4,058	4,101	4,151
Unemployed	329	359	340	345	356	391	382	378	357
Unemployment rate	7.6	8.0	7.6	7.8	8.2	8.9	8.6	8.4	7.9
New Jersey									
Civilian noninstitutional population	5,916	5,965	5,970	5,916	5,951	5,955	5,960	5,965	5,970
Civilian labor force	3,845	3,902	3,866	3,886	3,927	3,936	3,896	3,933	3,905
Employed	3,637	3,743	3,714	3,661	3,744	3,750	3,680	3,760	3,738
Unemployed	208	159	152	225	183	186	216	173	167
Unemployment rate	5.4	4.1	3.9	5.8	4.7	4.7	5.5	4.4	4.3
New York									
Civilian noninstitutional population	13,705	13,749	13,754	13,705	13,735	13,739	13,744	13,749	13,754
Civilian labor force	8,448	8,407	8,458	8,477	8,366	8,449	8,388	8,370	8,456
Employed	7,949	7,957	7,998	7,934	7,867	7,937	7,919	7,890	7,949
Unemployed	500	450	460	543	499	512	469	480	507
Unemployment rate	5.9	5.3	5.4	6.4	6.0	6.1	5.6	5.7	6.0
North Carolina									
Civilian noninstitutional population	4,692	4,770	4,777	4,692	4,748	4,755	4,762	4,770	4,777
Civilian labor force	3,191	3,194	3,209	3,215	3,194	3,195	3,196	3,189	3,220
Employed	3,057	3,021	3,054	3,067	3,028	3,021	3,035	3,017	3,047
Unemployed	134	173	155	148	166	174	161	172	173
Unemployment rate	4.2	5.4	4.8	4.6	5.2	5.4	5.0	5.4	5.4
Ohio									
Civilian noninstitutional population	8,080	8,108	8,111	8,080	8,099	8,101	8,105	8,108	8,111
Civilian labor force	5,156	5,279	5,256	5,186	5,161	5,158	5,204	5,266	5,290
Employed	4,721	4,891	4,839	4,749	4,740	4,720	4,803	4,887	4,872
Unemployed	436	388	418	437	421	438	401	379	418
Unemployment rate	8.5	7.3	7.9	8.4	8.2	8.5	7.7	7.2	7.9
Pennsylvania									
Civilian noninstitutional population	9,191	9,186	9,187	9,191	9,186	9,186	9,186	9,186	9,187
Civilian labor force	5,545	5,561	5,439	5,536	5,652	5,633	5,559	5,497	5,459
Employed	5,139	5,229	5,182	5,104	5,277	5,242	5,206	5,149	5,180
Unemployed	405	332	256	432	375	391	353	348	279
Unemployment rate	7.3	6.0	4.7	7.8	6.6	6.9	6.4	6.3	5.1
Texas									
Civilian noninstitutional population	11,806	11,980	11,996	11,806	11,931	11,946	11,963	11,980	11,996
Civilian labor force	7,994	8,215	8,254	8,049	8,068	8,130	8,241	8,245	8,303
Employed	7,489	7,489	7,535	7,489	7,328	7,400	7,460	7,461	7,507
Unemployed	505	726	719	560	740	730	781	784	796
Unemployment rate	6.3	8.8	8.7	7.0	9.2	9.0	9.5	9.5	9.6

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

NOTE: Revised seasonal factors are not yet available for State data. The seasonally adjusted series will be revised for the release of January data on February 6.

Table A-14. Persons not in labor force by reason, sex, and race, quarterly averages

(In thousands)

Reason, sex, and race	Not seasonally adjusted		Seasonally adjusted				
	1985	1986	1985	1986			
	IV	IV	IV	I	II	III	IV
TOTAL							
Total not in labor force	62,867	62,908	62,754	62,817	62,693	62,664	62,807
Do not want a job now	57,019	57,219	56,744	57,193	56,838	56,865	57,013
Current activity: Going to school	8,048	8,075	6,316	6,249	6,513	6,189	6,330
Ill, disabled	3,816	3,773	3,969	4,189	4,040	4,087	3,928
Keeping house	26,738	25,987	26,839	26,796	26,487	26,176	26,000
Retired	14,970	15,781	15,234	15,133	15,326	15,885	16,069
Other	3,447	3,683	4,386	4,826	4,471	4,528	4,686
Want a job now	5,847	5,690	5,961	5,789	5,882	5,980	5,808
Reason not looking: School attendance	1,432	1,378	1,483	1,416	1,379	1,578	1,427
Ill health, disability	930	817	854	835	898	903	746
Home responsibilities	1,283	1,277	1,366	1,365	1,311	1,203	1,347
Think cannot get a job	1,149	1,120	1,158	1,107	1,119	1,150	1,127
Job-market factors[1]	744	794	792	765	761	736	851
Personal factors[2]	406	326	365	343	358	414	277
Other reasons[3]	1,053	1,097	1,107	1,065	1,175	1,145	1,160
Men							
Total not in labor force	20,470	20,773	20,155	20,225	20,347	20,460	20,454
Do not want a job now	18,529	18,807	18,163	18,350	18,441	18,382	18,454
Want a job now	1,942	1,965	1,995	1,940	1,968	2,087	2,026
Reason not looking: School attendance	679	647	709	726	667	824	680
Ill health, disability	436	396	401	364	471	438	359
Think cannot get a job	474	483	492	438	392	425	497
Other reasons[3]	352	440	393	412	418	399	490
Women							
Total not in labor force	42,396	42,136	42,598	42,593	42,346	42,204	42,354
Do not want a job now	38,490	38,411	38,601	38,843	38,396	38,482	38,559
Want a job now	3,906	3,724	3,966	3,849	3,933	3,893	3,782
Reason not looking: School attendance	753	731	774	690	711	754	747
Ill health, disability	494	421	453	471	426	465	387
Home responsibilities	1,283	1,277	1,360	1,365	1,311	1,203	1,347
Think cannot get a job	675	637	666	669	727	725	630
Other reasons	700	658	713	653	757	746	670
White							
Total not in labor force	53,770	53,468	53,668	53,767	53,674	53,511	53,564
Do not want a job now	49,520	49,575	49,317	49,506	49,387	49,208	49,367
Want a job now	4,251	4,094	4,382	4,265	4,352	4,298	4,217
Reason not looking: School attendance	1,007	937	1,052	994	975	1,065	975
Ill health, disability	652	583	604	625	618	625	536
Home responsibilities	971	940	1,009	1,020	1,032	898	975
Think cannot get a job	765	772	808	749	741	780	817
Other reasons	855	862	910	876	985	931	914
Black							
Total not in labor force	7,367	7,449	7,317	7,274	7,238	7,423	7,405
Do not want a job now	5,973	6,056	5,930	5,947	5,937	6,027	6,020
Want a job now	1,396	1,393	1,397	1,353	1,299	1,425	1,423
Reason not looking: School attendance	351	380	348	386	333	460	381
Ill health, disability	259	209	235	211	220	248	192
Home responsibilities	260	281	295	287	270	263	318
Think cannot get a job	357	302	345	321	296	275	291
Other reasons	167	221	174	147	180	179	241

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[1] Job market factors include "could not find job" and "thinks no job available."

[2] Personal factors include "employers think too young or old," "lacks education or training," and "other personal handicap."

[3] Includes small number of men not looking for work because of home responsibilities.

NOTE: Seasonally adjusted data have been revised based on the experience through December 1986.

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Dec. 1985	Oct. 1986	Nov. 1986 p	Dec. 1986 p	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986 p	Dec. 1986 p
Total	99,546	101,595	101,874	101,991	98,910	100,283	100,560	100,826	101,065	101,334
Total private	82,686	84,554	84,661	84,810	82,281	83,655	83,786	83,956	84,168	84,384
Goods-producing	24,894	25,256	25,106	24,854	24,977	24,888	24,858	24,865	24,895	24,932
Mining	901	747	747	738	901	753	743	746	743	738
Oil and gas extraction	569.7	422.7	424.4	421.7	560	431	422	423	421	414
Construction	4,721	5,271	5,143	4,934	4,787	5,012	5,010	5,001	4,993	5,004
General building contractors	1,278.0	1,360.7	1,337.3	1,287.2	1,287	1,306	1,301	1,302	1,305	1,296
Manufacturing	19,272	19,238	19,216	19,182	19,289	19,123	19,105	19,118	19,159	19,190
Production workers	13,085	13,089	13,079	13,057	13,100	12,971	12,960	12,974	13,022	13,065
Durable goods	11,457	11,312	11,310	11,299	11,461	11,302	11,271	11,266	11,283	11,298
Production workers	7,592	7,478	7,484	7,481	7,595	7,458	7,438	7,435	7,456	7,479
Lumber and wood products	696.5	750.3	741.6	735.8	710	729	734	737	742	749
Furniture and fixtures	498.8	503.3	505.2	506.1	494	499	500	500	500	501
Stone, clay, and glass products	585.4	601.6	595.3	586.0	593	592	594	590	590	593
Primary metal industries	796.6	743.2	745.4	747.2	803	751	749	749	752	753
Blast furnaces and basic steel products	299.5	266.3	265.1	267.5	303	272	270	272	271	271
Fabricated metal products	1,459.2	1,439.0	1,437.2	1,434.6	1,456	1,429	1,433	1,429	1,429	1,430
Machinery, except electrical	2,136.5	2,037.2	2,031.7	2,033.7	2,133	2,072	2,044	2,039	2,036	2,032
Electrical and electronic equipment	2,184.0	2,169.5	2,166.7	2,163.9	2,182	2,168	2,162	2,167	2,165	2,162
Transportation equipment	2,008.9	1,982.8	2,003.1	2,012.3	1,998	1,985	1,979	1,979	1,995	1,998
Motor vehicles and equipment	881.2	829.0	842.3	846.2	872	839	834	824	837	835
Instruments and related products	725.6	711.8	710.0	711.4	725	713	713	713	709	711
Miscellaneous manufacturing	365.5	373.4	373.3	367.9	367	364	363	363	365	369
Nondurable goods	7,815	7,926	7,906	7,883	7,828	7,821	7,834	7,852	7,876	7,892
Production workers	5,493	5,611	5,595	5,576	5,505	5,513	5,522	5,539	5,566	5,586
Food and kindred products	1,612.4	1,691.5	1,666.8	1,641.5	1,623	1,642	1,644	1,644	1,654	1,651
Tobacco manufactures	67.0	64.4	62.5	61.0	64	59	60	59	61	58
Textile mill products	702.3	716.6	719.5	720.2	702	711	709	711	717	719
Apparel and other textile products	1,124.4	1,123.2	1,119.8	1,119.6	1,130	1,108	1,110	1,113	1,113	1,124
Paper and allied products	685.5	694.4	695.5	697.8	686	685	691	694	695	698
Printing and publishing	1,465.6	1,489.7	1,498.6	1,504.5	1,457	1,481	1,485	1,491	1,493	1,496
Chemicals and allied products	1,032.9	1,022.4	1,020.7	1,020.1	1,035	1,026	1,025	1,023	1,023	1,022
Petroleum and coal products	167.4	161.7	159.8	157.6	169	163	162	161	160	160
Rubber and miscellaneous plastics products	793.7	807.8	808.4	809.0	798	794	797	805	809	813
Leather and leather products	164.0	153.8	154.0	151.2	164	152	151	151	151	151
Service-producing	74,652	76,339	76,768	77,137	73,933	75,395	75,702	75,961	76,170	76,402
Transportation and public utilities	5,307	5,366	5,373	5,389	5,277	5,255	5,316	5,316	5,348	5,358
Transportation	3,076	3,144	3,140	3,158	3,046	3,063	3,088	3,094	3,115	3,127
Communication and public utilities	2,231	2,222	2,233	2,231	2,231	2,192	2,228	2,222	2,233	2,231
Wholesale trade	5,815	5,888	5,881	5,862	5,809	5,863	5,859	5,864	5,864	5,855
Durable goods	3,459	3,492	3,495	3,487	3,460	3,485	3,485	3,489	3,492	3,487
Nondurable goods	2,356	2,396	2,386	2,375	2,349	2,378	2,374	2,375	2,372	2,368
Retail trade	18,201	18,197	18,441	18,787	17,622	18,030	18,065	18,143	18,186	18,187
General merchandise stores	2,615.9	2,390.4	2,510.2	2,629.6	2,317	2,359	2,362	2,379	2,359	2,331
Food stores	2,907.8	2,971.7	3,004.7	3,040.0	2,870	2,951	2,952	2,963	2,969	2,977
Automotive dealers and service stations	1,908.9	1,974.5	1,970.5	1,967.9	1,922	1,962	1,970	1,973	1,976	1,982
Eating and drinking places	5,749.6	5,987.7	5,956.6	5,992.9	5,801	5,923	5,948	5,982	6,005	6,047
Finance, insurance, and real estate	6,080	6,395	6,416	6,450	6,095	6,364	6,388	6,409	6,431	6,466
Finance	3,051	3,202	3,215	3,234	3,053	3,192	3,202	3,212	3,221	3,237
Insurance	1,866	1,967	1,978	1,988	1,868	1,952	1,962	1,971	1,980	1,990
Real estate	1,163	1,226	1,223	1,228	1,174	1,220	1,224	1,226	1,230	1,239
Services	22,389	23,452	23,444	23,468	22,501	23,255	23,300	23,359	23,444	23,586
Business services	4,651.5	4,957.2	4,966.6	4,989.5	4,631	4,848	4,883	4,908	4,927	4,970
Health services	6,410.5	6,677.1	6,682.9	6,713.0	6,424	6,634	6,649	6,677	6,690	6,726
Government	16,860	17,041	17,213	17,181	16,629	16,628	16,774	16,870	16,897	16,950
Federal	2,902	2,876	2,879	2,889	2,913	2,875	2,901	2,896	2,899	2,901
State	3,974	4,050	4,084	4,065	3,904	3,919	3,932	3,959	3,969	3,993
Local	9,984	10,115	10,250	10,227	9,812	9,834	9,941	10,015	10,029	10,056

p = preliminary

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Dec. 1985	Oct. 1986	Nov. 1986 p	Dec. 1986 p	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986 p	Dec. 1986 p
Total private	35.2	34.7	34.7	34.9	34.9	34.8	34.7	34.7	34.8	34.6
Mining	43.8	42.2	41.7	42.2	(2)	(2)	(2)	(2)	(2)	(2)
Construction	36.9	38.0	36.6	37.0	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	41.7	40.8	41.0	41.7	40.9	40.8	40.8	40.7	40.9	40.9
Overtime hours	3.8	3.5	3.6	3.9	3.6	3.5	3.5	3.5	3.5	3.6
Durable goods	42.5	41.3	41.6	42.4	41.6	41.4	41.6	41.3	41.4	41.4
Overtime hours	4.1	3.6	3.7	4.1	3.7	3.5	3.6	3.6	3.6	3.7
Lumber and wood products	40.2	40.5	40.3	40.5	40.2	40.2	40.1	40.3	40.7	40.5
Furniture and fixtures	41.1	40.4	40.1	41.0	39.9	39.9	40.0	39.8	39.7	39.7
Stone, clay, and glass products	41.7	42.7	41.9	42.1	41.8	42.5	42.5	42.3	41.9	42.2
Primary metal industries	42.6	41.9	42.4	43.5	42.1	41.9	42.0	42.1	42.4	43.0
Blast furnaces and basic steel products	42.0	41.5	42.1	43.7	41.9	41.5	41.8	42.3	42.5	43.7
Fabricated metal products	42.6	41.3	41.5	42.3	41.6	41.2	41.5	41.2	41.4	41.3
Machinery, except electrical	42.9	41.5	41.9	42.8	41.7	41.7	41.7	41.6	41.7	41.6
Electrical and electronic equipment	42.2	40.9	41.3	42.0	41.1	41.2	41.2	40.9	40.9	40.9
Transportation equipment	44.2	42.0	42.5	43.6	43.0	42.6	42.6	42.1	42.3	42.3
Motor vehicles and equipment	45.3	42.1	42.5	44.0	44.0	42.8	42.7	42.1	42.5	42.6
Instruments and related products	42.6	40.9	41.5	42.6	41.6	41.0	40.7	41.1	41.2	41.6
Miscellaneous manufacturing	40.7	39.8	40.2	40.7	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	40.5	40.0	40.3	40.7	40.0	40.0	39.9	39.9	40.1	40.1
Overtime hours	3.5	3.5	3.6	3.6	3.4	3.4	3.3	3.4	3.5	3.5
Food and kindred products	40.7	40.0	40.1	40.5	40.1	40.3	39.7	39.8	39.9	39.9
Tobacco manufactures	38.1	39.1	38.4	38.2	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	41.5	41.7	42.0	42.3	41.0	41.4	41.6	41.5	41.6	41.8
Apparel and other textile products	37.1	36.9	37.2	37.5	36.8	36.5	36.7	36.7	36.9	37.1
Paper and allied products	44.3	43.1	43.4	44.0	43.5	43.5	43.0	43.0	43.2	43.2
Printing and publishing	38.8	38.1	38.3	38.7	38.1	38.0	38.0	38.0	38.0	38.0
Chemicals and allied products	42.5	41.9	42.7	43.0	42.0	42.1	42.0	42.2	42.6	42.5
Petroleum and coal products	43.7	43.8	43.8	43.9	43.6	44.3	43.4	43.7	43.7	43.8
Rubber and miscellaneous plastics products	42.0	41.4	41.7	42.2	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	37.9	36.8	37.1	37.9	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	39.7	39.1	39.3	39.2	39.5	39.1	38.9	39.1	39.3	39.0
Wholesale trade	38.6	38.4	38.4	38.4	38.4	38.4	38.2	38.4	38.3	38.2
Retail trade	29.8	29.0	29.0	29.4	29.2	29.2	29.2	29.1	29.2	28.8
Finance, insurance, and real estate	36.7	36.6	36.8	36.5	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.5	32.4	32.4	32.4	32.5	32.4	32.5	32.4	32.5	32.4

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[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Dec. 1985	Oct. 1986	Nov. 1986 p	Dec. 1986 p	Dec. 1985	Oct. 1986	Nov. 1986 p	Dec. 1986 p
Total private	$8.71	$8.81	$8.86	$8.85	$306.59	$305.71	$307.44	$308.87
Seasonally adjusted	8.70	8.80	8.85	8.84	303.63	305.36	307.98	305.86
Mining	12.27	12.51	12.57	12.64	537.43	527.92	524.17	533.41
Construction	12.47	12.62	12.59	12.71	460.14	479.56	460.79	470.27
Manufacturing	9.74	9.72	9.77	9.86	406.16	396.58	400.57	411.16
Durable goods	10.34	10.28	10.33	10.44	439.45	424.56	429.73	442.66
Lumber and wood products	8.35	8.37	8.39	8.41	335.67	338.99	338.12	343.97
Furniture and fixtures	7.38	7.50	7.51	7.60	303.32	303.00	301.15	311.60
Stone, clay, and glass products	9.85	10.10	10.12	10.15	414.92	431.27	424.03	427.32
Primary metal industries	11.84	11.84	11.88	11.98	504.38	496.10	503.71	521.13
Blast furnaces and basic steel products	13.44	13.78	13.77	13.92	564.48	571.87	579.72	608.30
Fabricated metal products	9.91	9.86	9.93	10.03	422.17	407.22	412.10	424.27
Machinery, except electrical	10.55	10.56	10.59	10.68	452.60	438.24	443.72	457.10
Electrical and electronic equipment	9.68	9.72	9.74	9.87	408.50	397.55	402.26	414.54
Transportation equipment	13.06	12.87	12.91	13.05	577.25	540.54	548.68	568.98
Motor vehicles and equipment	13.81	13.49	13.51	13.70	625.59	567.93	574.18	607.81
Instruments and related products	9.39	9.54	9.61	9.69	400.01	390.19	398.82	412.79
Miscellaneous manufacturing	7.48	7.60	7.63	7.71	304.44	302.48	306.73	313.80
Nondurable goods	8.87	8.95	9.00	9.05	359.24	358.00	362.70	368.34
Food and kindred products	8.71	8.68	8.78	8.85	354.50	347.20	352.08	358.43
Tobacco manufactures	11.78	12.10	12.62	13.04	448.82	473.11	484.61	499.43
Textile mill products	6.83	7.04	7.07	7.12	283.45	293.57	296.94	301.18
Apparel and other textile products	5.80	5.82	5.83	5.86	215.18	214.76	216.88	219.16
Paper and allied products	11.07	11.20	11.18	11.24	490.40	482.72	485.21	494.56
Printing and publishing	9.92	10.08	10.11	10.12	384.90	384.05	387.21	391.64
Chemicals and allied products	11.85	12.08	12.14	12.19	503.63	506.15	518.38	524.17
Petroleum and coal products	14.24	14.18	14.33	14.45	622.29	621.08	627.65	634.36
Rubber and miscellaneous plastics products	8.73	8.76	8.80	8.84	366.66	362.66	366.96	373.05
Leather and leather products	5.83	5.92	5.99	5.95	220.96	217.86	222.23	225.51
Transportation and public utilities	11.61	11.68	11.77	11.76	460.92	456.69	462.56	460.99
Wholesale trade	9.33	9.35	9.54	9.56	360.14	359.04	366.34	365.19
Retail trade	5.99	6.04	6.06	6.02	178.50	175.16	175.74	178.79
Finance, insurance, and real estate	8.15	8.38	8.56	8.52	299.11	306.71	315.01	311.83
Services	8.12	8.22	8.32	8.31	263.90	266.33	269.57	269.24

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[1] See footnote 1, table B-2.

p = preliminary

Table B-4. Hourly Earnings Index for production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Dec. 1985	Oct. 1986	Nov. 1986p	Dec. 1986p	Percent change from: Dec. 1985- Dec. 1986	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986p	Dec. 1986p	Percent change from: Nov. 1986- Dec. 1986
Total private nonfarm:												
Current dollars	168.2	170.0	171.0	171.2	1.8	167.7	169.3	169.6	170.0	170.9	170.8	-0.1
Constant (1977) dollars	94.6	94.9	95.4	N.A.	(2)	94.0	95.1	95.0	95.1	95.4	N.A.	(3)
Mining	181.7	181.4	182.5	182.8	.6	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	151.7	154.0	153.3	154.3	1.7	151.2	151.3	151.2	152.6	153.9	153.8	-.1
Manufacturing	171.3	172.6	173.1	174.0	1.6	171.0	172.9	172.8	173.1	173.1	173.7	.3
Transportation and public utilities	170.1	171.3	172.4	172.6	1.5	169.1	170.1	170.8	170.9	171.4	171.6	.1
Wholesale trade	172.2	172.6	175.8	175.7	2.1	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	157.0	156.7	158.9	158.1	.7	157.5	158.5	159.1	159.1	159.3	158.5	-.5
Finance, insurance, and real estate	176.2	180.7	184.0	183.3	4.0	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	172.8	175.5	177.2	177.1	2.5	171.6	174.3	174.4	175.1	176.7	175.9	-.4

1 See footnote 1, table B-2.
2 Percent change is 1.5 percent from November 1985 to November 1986, the latest month available.
3 Percent change is 0.3 percent from October 1986 to November 1986, the latest month available.
4 These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
N.A. Data not available.
p = preliminary.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Dec. 1985	Oct. 1986	Nov. 1986 p	Dec. 1986 p	Dec. 1985	Aug. 1986	Sept. 1986	Oct. 1986	Nov. 1986 p	Dec. 1986 p
Total	118.5	119.7	119.8	120.7	116.8	118.4	c118.3	118.6	119.3	119.0
Goods-producing	100.3	101.0	99.9	100.1	99.3	98.9	98.7	99.5	98.9	99.2
Mining	104.3	82.7	82.0	81.6	102.8	83.0	81.2	82.1	81.5	80.3
Construction	123.4	143.9	134.4	129.1	126.4	134.0	134.2	133.0	132.1	132.7
Manufacturing	95.6	93.6	94.1	95.4	94.0	92.9	92.7	92.6	93.2	93.6
Durable goods	94.7	90.7	91.4	93.1	92.7	90.7	90.5	90.1	90.6	91.0
Lumber and wood products	95.8	104.0	102.0	101.7	97.8	99.9	100.5	101.4	103.1	103.3
Furniture and fixtures	109.9	109.5	109.4	111.8	105.5	107.1	107.6	107.3	106.8	106.8
Stone, clay, and glass products	85.0	90.3	87.7	86.3	86.5	88.1	88.3	87.3	86.5	87.9
Primary metal industries	67.7	61.1	62.1	64.0	67.6	61.9	61.8	62.2	62.7	63.8
Blast furnaces and basic steel products	55.4	47.6	47.7	50.2	56.3	49.0	48.4	49.7	49.5	50.9
Fabricated metal products	93.6	89.5	90.1	91.7	91.2	88.5	89.4	88.6	89.1	89.3
Machinery, except electrical	93.1	84.9	85.4	87.5	90.3	87.5	85.8	85.3	85.2	84.9
Electrical and electronic equipment	107.3	102.8	103.9	105.7	104.4	103.2	102.9	102.3	102.6	102.7
Transportation equipment	102.8	94.8	97.4	100.5	99.0	95.9	95.9	94.9	96.4	96.4
Motor vehicles and equipment	96.2	82.8	85.2	88.8	92.8	84.8	84.4	82.1	84.6	84.5
Instruments and related products	109.0	103.3	105.2	108.4	106.3	104.5	103.5	104.2	104.2	105.8
Miscellaneous manufacturing	82.1	83.9	84.7	84.5	81.3	80.1	79.9	79.9	81.3	83.3
Nondurable goods	97.0	97.6	98.2	98.8	95.8	96.1	96.0	96.3	97.1	97.6
Food and kindred products	98.8	103.5	102.0	100.9	98.2	100.1	98.9	99.0	100.4	100.2
Tobacco manufactures	89.6	89.4	85.1	81.2	84.5	72.2	76.6	77.5	78.9	75.9
Textile mill products	78.7	81.0	81.9	82.7	77.7	79.6	79.6	79.9	80.9	81.6
Apparel and other textile products	87.4	87.2	87.6	88.3	87.2	85.0	85.6	85.9	86.4	87.8
Paper and allied products	103.7	102.2	103.2	105.5	101.8	101.6	101.2	102.0	102.7	103.7
Printing and publishing	129.7	130.0	131.6	134.0	126.3	128.6	128.9	129.7	129.7	130.5
Chemicals and allied products	94.7	92.9	94.4	94.9	93.9	94.0	93.4	93.7	94.6	94.2
Petroleum and coal products	79.8	80.6	79.6	79.5	80.8	81.3	78.9	79.4	79.4	80.4
Rubber and miscellaneous plastics products	113.1	114.2	115.1	116.4	111.6	112.6	113.4	113.5	114.8	114.9
Leather and leather products	64.0	58.0	58.6	58.7	63.3	56.9	56.6	56.8	56.9	58.1
Service-producing	128.6	130.1	130.8	132.0	126.5	129.2	129.2	129.7	130.5	129.9
Transportation and public utilities	109.4	108.3	109.3	109.5	108.1	105.7	c106.6	107.3	108.6	108.3
Wholesale trade	120.1	120.8	120.4	120.0	119.1	120.2	119.3	119.8	119.6	119.0
Retail trade	123.2	119.7	121.5	125.4	116.5	119.3	119.6	119.7	120.3	118.6
Finance, insurance, and real estate	133.4	139.3	140.6	140.3	133.5	139.1	138.7	139.7	141.5	140.2
Services	141.5	147.4	147.3	147.4	142.3	146.4	146.0	146.8	147.9	148.2

[1] See footnote 1, table B-2.

p = preliminary.

C = corrected

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1984..........	67.8	72.7	67.6	67.6	62.4	65.4	62.2	55.9	50.5	63.0	53.5	57.0
	1985..........	52.4	47.8	53.8	49.2	51.6	47.0	56.2	56.8	50.8	61.9	57.6	59.5
	1986..........	59.7	53.5	45.1	54.1	49.2	46.2	54.6	54.3	54.9	55.1	p61.1	p62.4
Over 3-month span	1984..........	76.5	75.1	75.9	71.4	71.6	68.1	63.2	58.1	56.8	53.5	58.1	53.0
	1985..........	51.1	49.7	46.2	46.2	45.1	51.4	49.7	51.1	55.1	55.9	61.4	60.5
	1986..........	58.1	54.3	51.1	49.7	48.4	44.9	47.3	54.1	54.9	p60.3	p65.1	
Over 6-month span	1984..........	78.1	76.5	77.0	75.1	69.2	65.1	63.2	59.2	58.6	53.2	49.7	54.9
	1985..........	49.2	47.8	43.0	45.9	44.3	44.3	48.9	50.8	54.1	57.0	57.0	55.9
	1986..........	53.8	53.8	47.6	45.9	45.9	48.6	49.7	p54.9	p60.5			
Over 12-month span	1984..........	81.1	78.1	72.2	72.2	68.9	67.8	65.7	62.7	59.7	54.6	51.4	48.6
	1985..........	46.2	45.7	46.8	43.8	44.9	47.3	47.6	48.9	47.3	49.5	48.9	48.6
	1986..........	50.3	51.1	52.2	52.4	p53.2	p53.5						

[1] Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

p = preliminary

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.

News
United States
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Bureau of Labor Statistics
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PRODUCER PRICE INDEXES--DECEMBER 1986

The Producer Price Index for Finished Goods showed no change from November to December seasonally adjusted, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The index had registered modest increases in each of the 4 previous months. Prices received by domestic producers of intermediate goods moved up 0.2 percent in December, the same as in November. Crude material prices declined 1.6 percent, following an increase of the same size in October and no change in November. (See table A.)

Among finished goods, prices for consumer foods were slightly lower for the second consecutive month. The index for energy goods edged up

Table A. Percent changes from preceding month in selected stage-of-processing price indexes, seasonally adjusted*

Month	Finished goods			Intermediate goods			Crude goods		
	Total	Consumer foods	Other	Total	Foods and feeds1/	Other	Total	Food- and feed-stuffs	Other
1985									
Dec.	0.6	1.0	0.5	0.4	0.7	0.4	-0.3	-0.5	-0.2
1986									
Jan.	-.7	-.6	-.8	-.5	-.5	-.5	-1.3	-2.5	-.1
Feb.	-1.6	-1.7	-1.6	-1.4	-1.4	-1.4	-5.4	-3.6	-7.3
Mar.	-1.0	.1	-1.3	-1.2	-.2	-1.2	-2.2	-.9	-3.7
Apr.	-.5	.1	-.8	-1.0	-.8	-1.0	-3.4	-3.1	-3.6
May	.5	1.3	.2	-.3	.7	-.3	2.1	4.4	-.6
June	.1	0	.2	0	-.1	0	-.5	-.7	-.2
July	-.6	1.8	-1.5	-.6	.2	-.6	.4	3.3	-3.5
Aug.	r.3	r1.6	r-.1	0	r1.2	-.1	r.3	r2.8	r-3.4
Sept.	r.5	r-.3	r.7	.5	r.5	.5	r.2	r-1.5	r2.8
Oct.	.3	.9	.1	-.3	-.8	-.3	1.6	2.6	.2
Nov.	.2	-.1	.3	.2	.3	.2	0	-.2	.2
Dec.	0	-.4	.2	.2	.4	.1	-1.6	-2.0	-1.1

1/ Intermediate materials for food manufacturing and animal feeds.
r= revised. Some of the figures shown above and elsewhere in this release may differ from those previously reported because data for August 1986 have been revised to reflect the availability of late reports and corrections by respondents.

marginally, after recording no change the month before. Prices for finished goods other than foods and energy moved up less than in most other recent months.

Before seasonal adjustment, the Producer Price Index for Finished Goods fell 0.3 percent in December to end the year at 289.9 (1967=100).

From December 1985 to December 1986, prices received by domestic producers at all three major stages of processing declined appreciably, principally because of substantially lower energy prices. The Finished Goods Price Index moved down 2.5 percent, following advances of less than 2 percent in each of the 3 immediately preceding years. The Intermediate Goods Price Index fell 4.4 percent over the year, after rising slowly from 1982 through 1984 and edging down 0.3 percent in 1985. The 1986 decreases for both these major stage-of-processing indexes were the largest calendar year declines since 1949. The drop of 9.7 percent in the Crude Goods Price Index was considerably larger than the declines recorded in 1984 and 1985 and was the largest drop for any calendar year since 1952.

Among major categories within the Finished Goods Price Index in 1986, the index for energy goods fell 39.1 percent, dwarfing the declines registered in other recent years. Consumer food prices climbed 2.9 percent, continuing the moderate increases registered for this index in each year after 1980. The increase in the index for consumer goods other than foods and energy accelerated from 1.9 percent in 1985 to 2.9 percent in 1986. Capital equipment prices rose less in 1986 (2.1 percent) than they had in 1985 (2.7 percent).

Table B. Percent changes in finished goods price indexes, selected periods*

Month	Changes from preceding month, seasonally adjusted						Change in finished goods from 12 months ago (unadj.)
	Finished goods	Capital equipment	Finished consumer goods	Finished consumer goods excluding foods			
				Total	Durables	Nondurables	
1985							
Dec.	0.6	0.1	0.7	0.6	-0.1	1.1	1.8
1986							
Jan.	-.7	-.2	-.9	-1.0	-.5	-1.4	1.3
Feb.	-1.6	.1	-2.1	-2.3	.2	-3.7	-.2
Mar.	-1.0	.2	-1.3	-2.0	.3	-3.3	-1.4
Apr.	-.5	.3	-.8	-1.2	.9	-2.5	-2.0
May	.5	0	.6	.3	-.2	.6	-1.8
June	.1	.2	.1	.1	.2	.1	-1.6
July	-.6	.1	-.8	-2.2	.1	-3.6	-2.4
Aug.	r.3	.1	.5	r-.1	r0	r-.1	-1.8
Sept.	r.5	.4	r.5	r.9	r.8	r1.0	-.9
Oct.	.3	.5	.3	0	1.4	-.9	-1.4
Nov.	.2	.3	.1	.3	.2	.3	-1.9
Dec.	0	0	0	.2	0	.4	-2.5

r= revised. Some of the figures shown above and elsewhere in this release may differ from those previously reported because data for August 1986 have been revised to reflect the availability of late reports and corrections by respondents.

Finished goods

Finished consumer goods. Following a rise of 0.2 percent in November, the index for finished consumer goods was unchanged in December seasonally adjusted, as a slight increase for energy goods offset a small decline for foods. The index for finished energy goods rose 0.2 percent after showing no change a month earlier. Prices rose sharply for both home heating oil and gasoline, following smaller advances in the previous month. In contrast, the natural gas index fell sharply in December, the ninth consecutive monthly decrease.

The index for finished consumer foods declined 0.4 percent, following an even smaller drop in November. After rising sharply a month earlier, prices turned down for fresh vegetables and eggs. Prices for beef and veal fell somewhat more than in November. Other decreases were noted for processed poultry, pork, fresh fruits, and roasted coffee. Prices for shortening and cooking oils moved up but much less than the month before. Fish prices turned up after falling in each of the 3 preceding months, however, while prices for dairy products and processed fruits and vegetables continued to climb.

Among other kinds of consumer goods, advances were registered for drugs, sanitary papers, men's footwear, motor homes, and household glassware. These were largely balanced by declines for passenger cars, soaps and detergents, small arms ammunition, cosmetics, gold jewelry, and apparel.

Capital equipment. The Producer Price Index for capital equipment was unchanged in December. Price increases included heavy motor trucks and power cranes, excavators, and equipment, while prices for light motor trucks and transformers and power regulators moved down.

Intermediate goods

The Producer Price Index for Intermediate Materials, Supplies, and Components moved up 0.2 percent from November to December, seasonally adjusted. An increase in energy prices, combined with declines in several other areas, yielded an overall monthly change identical to November's.

The intermediate energy index climbed 1.4 percent, following a small rise in November. Substantial advances occurred for gasoline, diesel fuel, residual fuel, and jet fuel. Prices for liquefied petroleum gas fell, although not as much as the month before.

After registering several consecutive months of small increases, the index for intermediate goods excluding foods and energy inched down 0.1 percent in December. The construction materials and components index fell 0.3 percent after an equal rise in November. Prices turned down after advancing in the prior month for softwood lumber, plywood, and gypsum products. In addition, prices for millwork and asphalt paving mixtures continued to fall.

The durable manufacturing materials index also recorded a 0.3 percent decrease. Downward movements were noted for Portland cement, hot rolled steel sheets and strip, zinc, gold, and silver. Platinum prices dropped sharply for the third consecutive month. Moderate increases, however, took place for copper and lead. Among materials used in maufacturing nondurable goods, substantially lower prices for styrene plastic resins were the dominant factor. Prices also moved down for paperboard and gray fabrics. Leather, woodpulp, lead paint pigments, and synthetic rubber advanced, however.

The intermediate foods and feeds index rose 0.4 percent, as advances for animal feeds, crude vegetable oils, and flour more than offset lower meat prices.

Crude goods

After showing no change in November, the Producer Price Index for Crude Materials for Further Processing dropped 1.6 percent in December seasonally adjusted. Many items, particularly foodstuffs, either turned down or fell faster than in the previous month.

The crude foodstuffs and feedstuffs index decreased 2.0 percent, following a 0.2 percent decline in November. Prices turned down for cattle, fresh vegetables, soybeans, and raw cane sugar after rising in the the preceding month. Prices dropped even faster than in November for hogs, turkeys, and hay. In contrast, price decreases for chickens and fresh fruits were such smaller than in the previous month, while prices for unprocessed fish and wheat turned up following November declines. Corn prices climbed nearly 10 percent for the second consecutive month, but still ended the year more than 30 percent lower than their December 1985 level.

Following declines of less than 1 percent in both October and November, the crude energy materials index dropped 3.0 percent. The natural gas index fell 6.8 percent, declining again as in most months during the past 2 years. Prices for crude petroleum edged up in December but were down more than 50 percent over the year.

The index for crude nonfood materials other than energy rose 1.4 percent, the third consecutive monthly increase ranging between 1 and 2 percent. Raw cotton prices increased substantially, as they have in other recent months following their record decline in August. Prices rose moderately for leaf tobacco, lead and zinc ores, and phosphates. However, wastepaper prices fell more than the month before, and cattle hides moved up much less than in either October or November.

Net output price indexes for major industry groups

The Producer Price Index for the net output of the domestic manufacturing sector was unchanged from November to December, following a slight rise (0.1 percent) in the previous month. Nearly half of the major manufacturing industry groups showed no change at all in December. The index for the net output of the petroleum refining industry group climbed 1.2 percent over the month, far more than its 0.2 percent increase in November. Prices for the leather and leather products industry group advanced 0.5 percent, considerably more than in other recent months. These increases balanced modest declines for several other industry groups, led by 0.4 percent drops in indexes for both the chemicals group and the transportation equipment group.

After falling 0.8 percent in November, the index for the net output of the domestic mining sector dropped 3.4 percent in December. Most of this downward movement stemmed from the 4.9 percent decrease in the index for the oil and gas extraction industry group. Although the metal mining industry group index climbed 1.3 percent in December, this was only about half as large as November's advance of 2.5 percent.

PPI Weights to be Updated

The Bureau of Labor Statistics has begun updating the value weights used to calculate Producer Price Indexes for traditional commodity groupings to reflect more recent production patterns. The revised weights, which will be introduced when January 1987 data are released in February, will be based on 1982 shipment values taken from the Census of Manufactures and other sources. Presently, PPI weights are derived from 1972 shipment values.

All indexes calculated from traditional commodity groupings (including all indexes in tables 1, 2, and 3) will be affected by the weight update. Although the allocation of commodities within the stage-of-processing framework will continue to be based on the 1972 input-output tables, the weights of individual commodities and commodity groupings will be revised. Industry indexes in table 4, which are based on the Standard Industrial Classification system, will continue to be calculated using 1977 net output weights.

The weight revision will not change the existing arithmetic reference period of the PPI index system. The PPI classification system will remain unchanged. Therefore, the continuity and comparability of PPI indexes will not be affected.

Producer Price Index data for 1987 will be released on the following dates (all Fridays) at 8:30 a.m. Eastern time:

Reference month	Release date	Reference month	Release date
January	February 13	July	August 14
February	March 13	August	September 11
March	April 10	September	October 16
April	May 15	October	November 13
May	June 12	November	December 11
June	July 10	December	January 15, 1988

Technical Notes

Brief Explanation of Producer Price Indexes

Producer price indexes (PPI) measure average changes in prices received by domestic producers of commodities in all stages of processing. Most of the information used in calculating the indexes is obtained through the systematic sampling of nearly every industry in the manufacturing and mining sectors of the economy. The PPI program also includes some information from other sectors—agriculture, fishing, forestry, services, and gas and electricity. Because producer price indexes are designed to measure only the change in prices received for the output of domestic industries, imports are not included. The sample currently contains about 3,200 commodities and 75,000 quotations per month.

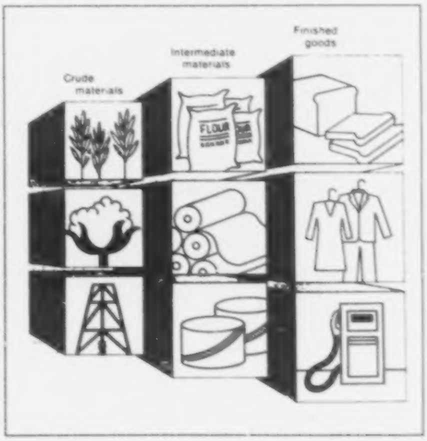
There are three primary systems of indexes within the PPI program: (1) Stage-of-processing indexes; (2) commodity indexes and; (3) indexes for the net output of industries and their products. The stage-of-processing structure (tables 1 and 2) organizes products by class of buyer and degree of processing. The commodity structure (tables 2 and 3) organizes products by similarity of end-use or material composition. The entire output of various industries is sampled to derive price indexes for the net output of industries and their products (table 4).

Within the stage-of-processing system, finished goods are commodities that will not undergo further processing and are ready for sale to the final demand user, either an individual consumer or a business firm. Consumer foods include unprocessed foods, such as eggs and fresh vegetables, as well as processed foods, such as bakery products and meats. Other finished consumer goods include durable goods, such as automobiles, household furniture, and appliances, and nondurable goods, such as apparel and home heating oil. Capital equipment includes producer durable goods such as heavy motor trucks, tractors, and machine tools.

The stage-of-processing category for intermediate materials, supplies, and components consists partly of commodities that have been processed but require further processing. Examples of such semifinished goods include flour, cotton yarn, steel mill products, and lumber. The intermediate goods category also encompasses items that are physically complete but that are purchased by business firms as inputs for their operations. Examples include diesel fuel, belts and belting, paper boxes, and fertilizers.

Crude materials for further processing are products entering the market for the first time that have not been manufactured or fabricated and that are not sold directly to consumers. Crude foodstuffs and feedstuffs include items such as grains and livestock. Examples of crude nonfood materials include raw cotton, crude petroleum, coal, hides and skins, and iron and steel scrap.

The illustration shows examples of how products are classified by stage of processing.



Producer price indexes for the net output of industries and their products are grouped according to the Standard Industrial Classification (SIC) and the Census product code extensions of the SIC. Industry price indexes are compatible with other economic time series organized by SIC codes, such as data on employment, wages, and productivity. Table 4 lists indexes for the net output of major mining and manufacturing industry groups at the 2-digit level.

Producer price indexes are based on selling prices reported by establishments of all sizes selected by probability sampling, with the probability of selection proportionate to size. Individual items and transaction terms from these firms are also chosen by probability proportionate to size. BLS strongly encourages cooperating companies to supply actual transaction prices at the time of shipment to minimize the use of list prices. Prices are normally reported monthly by mail questionnaire for the Tuesday of the week containing the 13th.

Price data are provided on a voluntary and confidential basis; no one but sworn BLS employees are allowed access to individual company price reports. All producer price indexes are routinely subject to revision once, 4 months after original publication, to reflect the availability of late reports and corrections by respondents.

Net output values of shipments are used as weights for industry indexes. Net output values refer to the value of shipments from establishments in one industry to establishments classified in another industry. However, weights for commodity price indexes are based on gross shipment values, including shipment values between establishments within the same industry. As a result, broad commodity grouping indexes such as the all commodities index are affected by the multiple counting of price change at successive stages of processing, which can lead to exaggerated or misleading signals about inflation. Stage-of-processing indexes partially correct this defect, but industry indexes consistently correct for this at all levels of aggregation. Therefore, industry and stage-of-processing indexes are more appropriate than broad commodity groupings for economic analysis of general price trends. Weights for most producer price indexes currently reflect values of shipments reported in the 1972 Census of Manufactures; these weights will be updated for 1982 Census of Manufactures data in 1987.

For further information on the underlying concepts and methodology of the Producer Price Index, see chapter 7, "Producer Prices," in *BLS Handbook of Methods* (1982), Bulletin 2134-1. Reprints are available from the Bureau of Labor Statistics on request (202-523-1221).

Calculating Index Changes

Movements of price indexes from one month to another are usually expressed as percent changes rather than as changes in index points because index point changes are affected by the level of the index in relation to its base period, while percent changes are not. The box shows the computation of index point and percent changes.

Percent changes for 3-month and 6-month periods can be expressed as annual rates that are computed according to the standard formula for compound growth rates. These data indicate what the percent change would be if the rate for a given 3- or 6- month span were maintained for a 12-month period.

Each index measures price changes from a reference period which equals 100.0 (1967 or some later month).

Index Point Change

Finished Goods Price Index	288.5
less previous index	285.0
equals index point change	3.5

Index Percent Change

Index point change	3.5
divided by the previous index	285.0
equals	0.012
results multiplied by 100	0.012 x 100
equals percent change	1.2

An increase of 188.5 percent from the reference period in the Finished Goods Price Index, for example, is shown as 288.5. This change can also be expressed in dollars as follows: "Prices received by domestic producers of a systematic sample of finished goods have risen from $100 in 1967 to $288.50 today." Likewise, a current index of 300.0 would indicate that prices received by producers of finished goods today are triple what they were in 1967.

Seasonally Adjusted and Unadjusted Data

Because price data are used for different purposes by different groups, the Bureau of Labor Statistics publishes seasonally adjusted as well as unadjusted changes each month.

Seasonally adjusted data usually are preferred for analyzing general price trends in the economy because they eliminate the effect of changes that normally occur at about the same time and in about the same magnitude every year—such as price movements resulting from normal weather patterns, regular production and marketing cycles, model changeovers, seasonal discounts, and holidays. For these reasons, seasonally adjusted data more clearly reveal underlying cyclical trends.

Unadjusted data are of primary interest to users who need information which can be related to the actual dollar values of transactions. Individuals requiring this information include marketing specialists, purchasing agents, budget and cost analysts, contract specialists, and commodity traders. It is the unadjusted data that are generally cited in escalating long-term contracts such as purchase agreements or real estate leases. (See *Escalation and Producer Price Indexes: A Guide for Contracting Parties*, BLS Report 570, available on request from BLS.)

For more information, see "Appendix A: Seasonal Adjustment Methodology at BLS" in the *BLS Handbook of Methods* (1982), Bulletin 2134-1.

Table 1. Producer price indexes and percent changes by stage of processing
(1967 = 100)

Grouping	Relative importance	Unadjusted index			Unadjusted percent change to Dec. 1986 from:		Seasonally adjusted percent change from:		
	Dec. 1985 1/	Aug. 1986 2/	Nov. 1986 2/	Dec. 1986 2/	Dec. 1985	Nov. 1986	Sept. to Oct.	Oct. to Nov.	Nov. to Dec.
Finished goods	100.000	288.1	290.7	289.9	-2.5	-0.3	0.3	0.2	0
Finished consumer goods	77.250	283.0	285.0	284.2	-3.8	-.3	.3	.1	0
Finished consumer foods	24.541	284.0	283.0	282.9	2.9	0	.9	-.1	-.4
Crude	1.848	268.9	284.5	282.3	.7	-.8	5.3	3.2	-2.0
Processed	22.693	282.9	280.5	280.6	3.0	0	.6	-.4	-.2
Finished consumer goods, excluding foods	52.709	277.5	281.1	279.9	-6.9	-.4	0	.3	.2
Nondurable goods less foods	34.463	301.6	302.1	300.5	-12.4	-.5	-.9	.3	.4
Durable goods	18.246	245.8	253.5	252.9	3.5	-.2	1.4	.2	0
Capital equipment	22.750	306.2	310.5	310.1	2.1	-.1	.5	.3	0
Manufacturing industries	6.794	325.5	328.1	327.9	2.1	-.1	.2	.2	0
Nonmanufacturing industries	15.956	295.4	300.4	299.8	2.1	-.2	.6	.3	0
Intermediate materials, supplies, and components	100.000	304.5	304.9	305.0	-4.4	0	-.3	.2	.2
Materials and components for manufacturing	46.438	296.0	296.5	296.2	-.6	-.1	.1	.1	0
Materials for food manufacturing	3.428	255.5	253.2	253.0	-.5	-.1	.5	.1	0
Materials for nondurable manufacturing	13.538	277.1	278.1	277.9	-1.8	-.1	.3	.3	-.1
Materials for durable manufacturing	12.826	313.6	315.0	313.8	-1.2	-.4	.5	0	-.3
Components for manufacturing 3/	16.646	294.9	295.0	295.2	1.0	.1	-.1	0	.1
Materials and components for construction	14.701	317.6	317.6	317.0	.4	-.2	-.1	.3	-.3
Processed fuels and lubricants	15.494	395.0	393.2	396.2	-28.9	.8	-3.0	.3	1.6
Manufacturing industries	5.860	347.7	348.6	350.5	-25.8	.5	-2.7	.6	.8
Nonmanufacturing industries	9.634	437.5	433.4	437.3	-30.8	.9	-3.2	0	2.0
Containers	4.365	316.2	319.6	319.7	2.9	0	0	.5	.2
Supplies	19.003	287.1	287.9	288.5	.9	.1	0	0	.2
Manufacturing industries	6.953	288.0	288.9	288.9	1.0	0	.1	.2	0
Nonmanufacturing industries	12.049	286.9	287.7	288.3	.9	.2	-.3	.1	.3
Feeds	1.307	184.2	184.8	187.8	-.2	1.6	-4.5	.7	1.7
Other supplies	10.742	307.9	308.7	308.8	1.0	0	0	.2	.1
Crude materials for further processing	100.000	276.3	278.4	274.8	-9.7	-1.3	1.6	0	-1.6
Foodstuffs and feedstuffs	52.682	238.1	235.9	232.8	-1.7	-1.3	2.6	-.2	-2.0
Nonfood materials	47.318	358.3	369.7	365.1	-18.9	-1.2	.2	.2	-1.1
Nonfood materials except fuel 4/	30.143	259.8	276.7	278.6	-20.8	.7	.8	1.0	.9
Manufacturing 5/	26.574	250.3	269.5	271.8	-23.7	.9	.9	1.0	1.1
Construction	3.570	288.8	290.1	289.6	1.2	-.2	1.0	.5	0
Crude fuel 3/ 5/	17.175	783.9	766.0	729.4	-16.3	-4.8	-1.0	-.9	-4.8
Manufacturing industries 3/	9.273	898.0	874.9	825.5	-18.6	-5.6	-1.2	-1.1	-5.6
Nonmanufacturing industries 3/	7.902	707.1	693.2	666.6	-13.7	-3.8	-.9	-.7	-3.8
Special groupings									
Finished goods, excluding foods	6/ 75.459	286.8	290.7	289.7	-4.2	-.3	.1	.3	.2
Intermediate materials less foods and feeds	7/ 95.265	309.9	310.4	310.5	-4.5	0	-.3	.2	.1
Intermediate foods and feeds	7/ 4.735	232.1	230.9	231.7	-.4	.3	-.8	.3	.4
Crude materials less agricultural products 5/ 8/	9/ 44.239	408.7	417.4	409.9	-19.6	-1.8	-.5	.2	-1.6
Finished energy goods	6/ 12.455	456.2	452.9	446.8	-39.1	-1.3	-4.3	0	.2
Finished goods less energy	6/ 87.545	277.2	280.0	279.5	2.7	-.2	.8	.2	0
Finished consumer goods less energy	6/ 64.795	270.0	272.4	271.9	2.9	-.2	.8	.2	0
Finished goods less foods and energy	6/ 63.004	274.8	279.1	278.5	2.6	-.2	.7	.3	.1
Finished consumer goods less foods and energy	6/ 40.254	258.4	262.7	262.0	2.9	-.3	.8	.3	.2
Consumer nondurable goods less foods and energy	6/ 22.008	253.8	254.9	254.2	2.4	-.3	.3	.3	.5
Intermediate energy goods	7/ 15.700	380.7	378.7	381.3	-28.9	.7	-2.3	.3	1.4
Intermediate materials less energy	7/ 84.300	303.5	304.2	304.0	.2	-.1	0	.2	0
Intermediate materials less foods and energy	7/ 79.565	304.2	305.1	304.8	.1	-.1	.1	.2	-.1
Crude energy materials 3/ 4/	9/ 31.418	520.4	535.3	519.5	-29.4	-3.0	-.9	-.7	-3.0
Crude materials less energy	9/ 68.582	232.4	232.7	230.9	-.9	-.8	2.4	.3	-1.2
Crude nonfood materials less energy 5/	9/ 15.900	235.9	244.5	246.9	1.6	1.0	1.7	1.6	1.4

1/ Comprehensive relative importance figures are computed once each year in December.
2/ Data for Aug. 1986 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.
3/ Not seasonally adjusted.
4/ Includes crude petroleum.
5/ Excludes crude petroleum.
6/ Percent of total finished goods.
7/ Percent of total intermediate materials.
8/ Formerly titled "Crude materials for further processing, excluding crude foodstuffs and feedstuffs, plant and animal fibers, oilseeds, and leaf tobacco."
9/ Percent of total crude materials.

Table 2. Producer price indexes and percent changes for selected commodity groupings by stage of processing
(1967 = 100 unless otherwise indicated)

Commodity code	Grouping	Unadjusted index			Unadjusted percent change to Dec. 1986 from:		Seasonally adjusted percent change from:		
		Aug. 1986 1/	Nov. 1986 1/	Dec. 1986 1/	Dec. 1985	Nov. 1986	Sept. to Oct.	Oct. to Nov.	Nov. to Dec.
	FINISHED GOODS	288.1	290.7	289.9	-2.5	-0.3	0.3	0.2	0
	FINISHED CONSUMER GOODS	283.0	285.0	284.2	-3.8	-.3	.3	.1	0
	FINISHED CONSUMER FOODS	284.0	283.0	282.9	2.9	0	.9	-.1	-.4
01-11	Fresh fruits	274.5	271.0	271.1	.2	0	19.6	-5.4	-1.1
01-13	Fresh and dried vegetables	237.8	262.5	251.9	2.9	-4.0	1.4	10.2	-8.3
01-7	Eggs	191.4	197.4	194.0	-3.0	-1.7	-5.0	10.7	-1.4
02-11	Bakery products	322.9	322.5	321.1	.5	-.4	-.4	-.2	-.3
02-13	Milled rice	144.6	140.5	139.6	-27.5	-.6	-1.0	-1.4	-.1
02-21-01	Beef and veal	220.9	223.5	219.8	-6.3	-1.7	2.3	-1.5	-2.1
02-21-04	Pork	296.2	259.4	263.4	13.4	1.5	-2.7	-2.1	-1.6
02-22	Processed poultry	245.8	213.3	200.5	-1.8	-6.0	9.1	-10.7	-4.9
02-23	Fish	522.7	544.1	569.4	7.9	4.6	-.5	-1.1	3.8
02-3	Dairy products	249.6	253.5	254.4	3.3	.4	0	.6	.6
02-4	Processed fruits and vegetables 2/	288.5	289.4	292.0	1.3	.9	-.7	.8	.9
02-55	Confectionery end products (Dec. 1977=100)	156.7	159.7	159.7	6.5	0	1.4	-.2	.4
02-62	Soft drinks 2/	347.6	351.0	351.6	2.8	.2	.6	-.1	.2
02-63-01	Roasted coffee	451.6	444.8	444.5	18.2	-.1	-.8	-.7	-.7
02-76	Shortening and cooking oils	235.5	241.3	236.3	-9.3	-2.1	-.3	3.3	.4
	FINISHED CONSUMER GOODS EXCLUDING FOODS	277.5	281.1	279.9	-6.9	-.4	0	.3	.2
02-61	Alcoholic beverages 2/	218.8	218.0	218.3	1.0	.1	1.0	-.3	.1
03-81-01	Women's apparel	184.9	185.3	184.1	.4	-.6	.2	.2	-.4
03-81-02	Men's and boys' apparel	233.4	234.7	234.4	1.4	-.1	.2	.5	.2
03-81-03	Girls', children's, and infants' apparel	202.9	204.4	204.4	-.2	0	1.3	0	-.3
03-82	Textile housefurnishings 2/	242.5	241.8	241.8	1.3	0	.4	1.6	0
04-3	Footwear	261.6	263.5	263.8	2.0	.1	.7	.2	.4
05-31	Natural gas 2/	1132.4	1098.8	1023.7	-21.6	-6.8	-1.3	-1.4	-6.8
05-71	Gasoline	310.7	311.6	316.2	-44.6	1.5	-7.4	.9	4.4
05-73-02-01	Fuel oil No. 2 (Feb. 1973=100)	353.4	368.3	385.6	-48.9	4.7	-7.5	1.8	6.7
06-35	Pharmaceutical preps, ethical (Prescription)	276.8	282.6	282.8	9.8	.1	1.1	.8	1.0
06-36	Pharmaceutical preps,proprietary (Over-counter)	324.5	326.1	331.8	6.2	1.7	-.6	.7	2.1
06-71	Soaps and synthetic detergents 2/	271.5	274.3	267.6	-3.2	-2.4	1.0	.3	-2.4
06-75	Cosmetics and other toilet preparations	251.8	257.7	252.7	2.7	-1.9	1.1	.6	-1.2
07-12	Tires, tubes, tread, etc	233.2	230.9	230.9	-1.9	0	.3	-1.2	.1
09-15-01	Sanitary papers and health products 2/	383.4	380.5	382.3	.8	.5	0	-.8	.5
09-31-01	Newspaper circulation (Dec. 1980=100) 2/	141.7	144.3	144.1	4.4	-.1	.7	1.0	-.1
09-32-01	Periodical circulation (Dec. 1980=100) 2/	147.9	148.2	148.7	3.6	.3	.1	.2	.3
09-33	Book publishing (Dec. 1980=100) 2/	139.2	142.6	142.7	4.5	.1	1.2	.4	.1
12-1	Household furniture	254.3	254.8	255.3	1.9	.2	0	.3	.4
12-3	Floor coverings	196.1	196.7	196.7	3.1	0	1.3	.6	0
12-4	Household appliances	210.3	209.6	210.0	-1.0	.2	.2	-.1	.3
12-5	Home electronic equipment	79.1	79.4	79.4	-.1	0	0	.3	.1
12-62	Household glassware	517.8	515.1	523.4	2.1	1.6	-.6	.5	1.3
12-64	Household flatware	352.1	352.1	352.1	-6.5	0	-1.8	-.3	-.1
14-11-01	Passenger cars	231.3	249.4	247.7	6.6	-.7	4.7	0	-.2
15-11	Toys, games, and children's vehicles	241.1	241.3	241.6	2.4	.1	0	.2	0
15-12	Sporting and athletic goods	207.4	208.0	207.9	2.1	0	0	.1	0
15-2	Tobacco products	469.2	469.3	469.3	7.8	0	.4	0	.9
15-5	Mobile homes (Dec. 1974=100) 2/	167.0	168.0	167.6	1.6	-.2	.1	.4	-.2
15-94-02	Jewelry, platinum, & karat gold(Dec. 1978=100) 2/	183.0	188.0	186.8	(3)	-.6	2.3	-1.4	-.6
15-94-04	Costume jewelry and novelties(Dec. 1978=100) 2/	145.2	145.2	145.2	.2	0	0	0	0
	CAPITAL EQUIPMENT	306.2	310.5	310.1	2.1	-.1	.5	.3	0
11-1	Agricultural machinery and equipment	340.2	340.2	340.0	.6	-.1	-.1	0	-.1
11-2	Construction machinery and equipment 2/	367.0	369.8	370.7	2.0	.2	.1	.7	.2
11-37	Metal cutting machine tools	405.6	407.7	408.2	3.2	.1	.3	.1	.2
11-38	Metal forming machine tools	440.9	443.0	442.2	1.2	-.2	.1	.3	-.4
11-41	Pumps, compressors, and equipment	362.2	364.5	363.9	2.2	-.2	0	.2	-.2
11-44	Industrial material handling equipment 2/	297.0	297.2	297.7	.8	.2	0	.1	.2
11-62	Textile machinery	287.2	289.3	289.3	3.5	0	.5	.4	.1
11-65	Printing trades machinery 2/	332.0	332.0	332.1	.6	0	0	-.2	0
11-74	Transformers and power regulators 2/	234.4	237.2	234.8	.8	-1.0	-.2	1.5	-1.0
11-91	Oil field and gas field machinery 2/	412.1	409.9	410.5	-3.5	.1	.1	.3	.1
11-92	Mining machinery and equipment	382.3	381.8	381.3	-.1	-.1	-.2	-.1	0
11-93	Office and store machines and equipment 2/	154.5	155.0	155.2	1.0	.1	.2	.2	.1
12-2	Commercial furniture	318.0	320.8	320.9	2.3	0	1.0	-.2	.2
14-11-05	Light motor trucks	306.3	330.6	324.0	3.7	-2.0	3.1	.2	-1.4
14-11-06	Heavy motor trucks	348.0	347.8	348.2	3.8	.1	.5	.5	1.2
14-14	Truck trailers (June 1980=100) 2/	113.3	111.9	111.9	-2.3	0	-.8	0	0
14-21-02	Civilian aircraft (Dec. 1985=100) 2/	101.1	101.8	101.6	1.6	-.2	.6	0	-.2
14-4	Railroad equipment	363.5	364.6	364.5	0	0	.1	.4	-.1
	INTERMEDIATE MATERIALS, SUPPLIES, AND COMPONENTS	304.5	304.9	305.0	-4.4	0	-.3	.2	.2
	INTERMEDIATE FOODS AND FEEDS	232.1	230.9	231.7	-.4	.3	-.8	.3	.4
02-12-03	Flour	165.4	164.4	164.5	-10.5	.1	2.0	-.3	1.2
02-53	Refined sugar (Dec. 1977=100) 2/	166.6	168.6	169.1	3.7	.3	.3	.2	.3
02-54	Confectionery materials (Dec. 1977=100)	139.9	136.1	136.4	-1.2	.2	-2.0	3.9	.9
02-72	Crude vegetable oils	123.0	124.2	122.8	-25.5	-1.1	-5.3	4.9	3.1
02-9	Prepared animal feeds	197.6	198.2	200.5	.4	1.2	-4.2	.6	1.1
	INTERMEDIATE MATERIALS LESS FOODS AND FEEDS	309.9	310.4	310.5	-4.5	0	-.3	.2	.1
03-1	Syn~~thetic fibers (Dec~~. 1975=100)	149.6	148.7	148.4	-1.6	-.2	0	.1	0
03-2	Processed yarns and threads (Dec. 1975=100)	141.2	141.2	141.2	.5	0	-.5	.3	-.1
03-3	Gray fabrics (Dec. 1975=100)	150.3	149.9	149.7	-1.3	-.1	-.6	.4	-.5
03-4	Finished fabrics (Dec. 1975=100)	126.6	126.4	126.3	.2	-.1	0	0	.1
04-2	Leather	391.8	389.6	403.5	11.4	3.6	-2.4	2.4	3.9
05-32	Liquefied petroleum gas 2/	297.9	296.9	294.2	-52.4	-.9	7.2	-4.7	-.9
05-4	Electric power	466.7	448.4	447.0	-1.0	-.3	-1.5	.4	.2
05-72-03	Jet fuels (Feb. 1973=100) 2/	342.0	348.4	356.0	-47.4	2.2	-.3	-1.2	2.2
05-73-03	No. 2 Diesel fuel (Feb. 1973=100) 2/	303.8	340.0	357.4	-49.7	5.1	-7.1	1.5	5.1
05-74	Residual fuel	361.0	450.8	479.7	-49.8	6.4	7.8	.2	8.0
06-1	Industrial chemicals	315.5	316.0	316.9	-6.0	.3	.9	-.3	.2
06-21	Prepared paint 2/	282.5	282.4	281.9	1.3	-.2	0	0	-.2
06-22	Paint materials	313.7	310.4	311.9	-5.7	.5	-1.6	.7	.5
06-31	Medicinal and botanical chemicals 2/	198.8	202.1	201.4	-1.6	-.3	.2	.3	-.3
06-4	Fats and oils, inedible	190.0	219.5	224.5	-8.5	2.3	10.9	1.9	.9

See footnotes at end of table.

Table 2. Continued—Producer price indexes and percent changes for selected commodity groupings by stage of processing
(1967 = 100 unless otherwise indicated)

Commodity code	Grouping	Unadjusted index			Unadjusted percent change to Dec. 1986 from:		Seasonally adjusted percent change from:		
		Aug. 1986 1/	Nov. 1986 1/	Dec. 1986 1/	Dec. 1985	Nov. 1986	Sept. to Oct.	Oct. to Nov.	Nov. to Dec.
	INTERMEDIATE MATERIALS LESS FOODS AND FEEDS -Continued								
06-51	Mixed fertilizers	252.0	245.6	245.5	-3.6	0	-1.0	-0.8	0
06-52-01	Nitrogenates	159.7	153.4	154.7	-21.0	.8	-2.0	-1.6	.8
06-52-02	Phosphates	262.6	252.8	254.3	-4.1	.6	-3.3	-.7	.6
06-53	Other agricultural chemicals	477.0	478.0	479.0	6.0	.2	-.3	.3	.4
06-6	Plastic resins and materials	294.4	295.5	288.5	-3.6	-2.4	.8	1.0	-2.0
07-11-02	Synthetic rubber	265.3	255.9	259.0	-8.8	1.2	-.6	-1.2	1.0
07-21	Plastic construction products (Dec. 1969=100)	156.5	158.2	158.8	-4.5	.4	-1.3	3.0	-.3
07-22	Unsupported plastic film, sheet, and other shapes (Dec. 1970=100) 2/	224.8	224.5	224.8	-.2	.1	-.7	.3	.1
07-26	Plastic parts and components for manufacturing (June 1978=100) 2/	151.0	146.9	147.2	3.7	.2	-2.7	0	.2
08-11	Softwood lumber	351.3	352.9	349.5	6.5	-1.0	.7	1.4	-2.7
08-12	Hardwood lumber	311.6	315.1	316.4	5.1	.4	1.0	.7	.4
08-2	Millwork	321.8	318.6	318.1	1.8	-.2	-.6	-.6	-.7
08-3	Plywood	235.1	235.2	233.7	1.3	-.6	-.5	.4	-1.6
09-11	Woodpulp 2/	367.0	379.2	387.4	16.9	2.2	.9	1.2	2.2
09-13	Paper	307.4	312.8	313.4	4.1	.2	.5	.8	.3
09-14	Paperboard	274.9	281.7	278.7	4.5	-1.1	1.1	.4	-.6
09-15-03	Paper boxes and containers	269.9	274.7	274.9	3.3	.1	-.3	.4	-.3
09-2	Building paper and board	262.2	262.7	262.5	3.5	-.1	1.4	.1	.5
09-37	Commercial printing (June 1982=100) 2/	114.0	114.4	114.6	1.7	.2	.2	0	.2
10-15	Foundry and forge shop products	362.1	361.6	363.3	-.1	.5	0	0	.7
10-17	Steel mill products	349.5	350.4	349.7	-4.1	-.2	-.1	0	0
10-22	Primary nonferrous metals	268.1	273.6	270.6	5.5	-1.1	2.6	-.8	-.7
10-25	Nonferrous mill shapes	300.7	299.5	297.4	-2.8	-.7	-.2	.2	-.8
10-26	Nonferrous wire and cable	205.5	204.8	204.7	-.5	0	.4	-.1	0
10-3	Metal containers	362.6	362.5	362.5	.6	0	-.1	.1	0
10-4	Hardware	306.8	304.9	305.3	-.8	.1	.3	-.6	0
10-5	Plumbing fixtures and brass fittings	322.9	322.9	322.2	2.4	-.2	.2	-.9	0
10-6	Heating equipment	269.2	271.4	271.7	3.7	.1	.5	0	.2
10-7	Fabricated structural metal products 2/	316.1	317.8	316.8	.6	-.3	-.3	.5	-.3
11-45	Mechanical power transmission equipment 2/	347.8	349.2	349.3	3.3	0	.4	0	0
11-48	Air conditioning and refrigeration equipment (Dec. 1977=100) 2/	149.2	149.0	148.9	.8	-.1	.1	-.2	-.1
11-49-02	Metal valves, ex.fluid power (Dec. 1982=100) 2/	107.0	107.3	107.4	1.5	.1	.3	-.1	.1
11-49-05	Ball and roller bearings	357.2	356.4	355.7	.7	-.2	-.1	-.1	.1
11-71	Wiring devices	374.5	379.8	380.6	6.5	.2	-.2	.3	0
11-73	Motors, generators, motor generator sets	353.1	352.8	352.6	.4	-.1	-.3	.3	-.1
11-75	Switchgear, switchboard, etc., equipment 2/	285.6	285.8	285.8	1.4	0	-.3	-.1	0
11-78	Electronic components and accessories	202.7	203.4	203.1	2.4	-.1	.4	0	-.1
11-94	Internal combustion engines	354.3	353.8	353.8	1.9	0	.7	.2	.1
13-11	Flat glass 2/	232.4	232.7	233.0	1.3	.1	.1	0	.1
13-22-01-31	Portland cement	350.1	348.1	341.5	-4.3	-1.9	1.5	-.6	-1.2
13-3	Concrete products	325.1	323.8	324.6	.2	.2	0	0	.3
13-6	Asphalt felts and coatings	387.6	375.2	371.7	-8.7	-.9	-2.0	-.6	-.2
13-7	Gypsum products 2/	343.8	352.4	347.4	-2.5	-1.4	1.0	3.1	-1.4
13-8	Glass containers	402.1	401.6	402.0	3.9	.1	.2	.4	.3
14-12	Motor vehicle parts	357.9	358.0	358.9	.9	.3	-.1	.1	.1
15-42	Photographic supplies	294.7	296.4	296.2	1.4	-.1	.2	.5	.1
	CRUDE MATERIALS FOR FURTHER PROCESSING	276.3	278.4	274.8	-9.7	-1.3	1.6	0	-1.6
	CRUDE FOODSTUFFS AND FEEDSTUFFS	238.1	235.9	232.8	-1.7	-1.3	2.6	-.2	-2.0
01-21	Wheat	150.4	164.9	168.8	-18.7	2.4	6.7	-.2	3.1
01-22-02-05	Corn	133.6	126.6	132.8	-30.9	4.9	1.8	9.0	9.7
01-31	Cattle	228.5	236.0	232.3	-2.2	-1.6	-.7	3.6	-3.4
01-32	Hogs	301.2	252.0	251.3	16.0	-.3	-2.8	-3.5	-5.5
01-4	Live poultry	340.0	250.9	219.7	-6.6	-12.4	24.3	-23.9	-8.9
01-6	Fluid milk	256.2	270.4	271.4	6.3	.4	2.2	.9	.4
01-83-01-31	Soybeans	180.7	184.8	172.8	-10.9	-6.5	.5	.1	-3.1
02-52-01-01	Cane sugar, raw	292.9	299.0	294.4	8.0	-1.5	3.9	1.1	-2.1
	CRUDE NONFOOD MATERIALS	358.3	369.7	365.1	-18.9	-1.2	.2	.2	-1.1
01-51-01-01	Raw cotton 2/	92.0	155.1	179.1	-5.6	15.5	42.6	2.2	15.5
01-92-01-01	Leaf tobacco	225.5	230.8	230.8	-10.3	0	-2.1	.6	1.7
04-11	Cattle hides	506.8	533.0	541.7	6.7	1.6	4.7	4.4	.2
05-1	Coal 2/	538.4	535.0	535.0	-1.1	0	-.3	-.3	0
05-31	Natural gas 2/	1132.4	1098.8	1023.7	-21.6	-6.8	-1.3	-1.4	-6.8
05-61	Crude petroleum 2/	263.8	307.3	308.0	-50.7	.2	-.8	-.3	.2
08-5	Logs, timber, etc.(Dec. 1981=100) 2/	89.5	90.0	90.2	-2.4	.2	.7	.4	.2
09-12	Wastepaper 2/	200.3	204.6	192.4	52.0	-6.0	1.3	-1.2	-6.0
10-11	Iron ore 2/	243.5	241.0	243.3	-7.7	1.0	-7.9	-.6	1.0
10-12	Iron and steel scrap	256.5	255.5	257.4	4.4	.7	-.3	3.0	-.5
10-23-01	Copper base scrap	123.4	127.3	127.3	1.9	0	.7	3.0	2.0
10-23-02	Aluminum base scrap	393.1	393.1	393.1	11.2	0	4.0	5.3	2.5
13-21	Construction sand, gravel, and crushed stone	319.3	320.1	319.1	2.9	-.3	0	.5	.1

1/ Data for August 1986 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

2/ Not seasonally adjusted.

3/ Not available.

Table 3. Producer price indexes for selected commodity groupings
(1967=100 unless otherwise indicated)

Commodity code	Grouping	Unadjusted index 1/		
		Aug. 1986	Nov. 1986	Dec. 1986
	All Commodities	297.2	298.7	298.1
	All Commodities (1957-59=100)	315.3	316.9	316.3
	MAJOR COMMODITY GROUPS			
	Farm products and processed foods and feeds	255.5	255.2	254.6
01	Farm products	227.0	229.3	226.8
02	Processed foods and feeds	269.6	267.9	268.4
	Industrial commodities	307.9	309.8	309.3
03	Textile products and apparel	211.2	211.3	211.0
04	Hides, skins, leather, and related products	297.0	299.1	301.5
05	Fuels and related products and power 2/	438.4	438.2	435.9
06	Chemicals and allied products 2/	297.0	298.5	297.5
07	Rubber and plastic products	246.2	244.4	244.9
08	Lumber and wood products	307.2	307.6	306.7
09	Pulp, paper, and allied products	336.4	340.5	340.6
10	Metals and metal products	311.1	312.2	311.8
11	Machinery and equipment	304.1	304.9	305.0
12	Furniture and household durables	224.2	224.6	225.0
13	Nonmetallic mineral products	351.8	350.9	349.8
14	Transportation equipment (Dec.,1968=100)	274.7	282.7	281.7
15	Miscellaneous products	309.7	310.5	309.9
	Industrial commodities less fuels and related products and power	293.8	295.9	295.5
	OTHER COMMODITY GROUPINGS			
01-2	Grains	138.9	146.3	149.7
01-3	Livestock	253.0	247.1	244.5
01-5	Plant and animal fibers	94.3	154.0	176.7
01-8	Hay, hayseeds, and oilseeds	190.2	210.2	199.7
01-83	Oilseeds	187.7	208.9	196.3
01-9	Other farm products	246.7	251.8	258.0
02-1	Cereal and bakery products	281.4	280.4	280.6
02-2	Meats, poultry, and fish	277.4	266.9	266.4
02-5	Sugar and confectionery	296.0	299.6	299.7
02-6	Beverages and beverage materials	292.9	292.5	292.8
02-63	Packaged beverage materials	425.9	420.6	420.3
02-7	Fats and oils	199.7	204.0	200.7
03-81	Apparel	206.5	207.4	206.7
04-4	Other leather and related products	272.2	272.2	272.4
05-3	Gas fuels 2/	809.9	789.0	742.1
05-7	Refined petroleum products	336.9	346.6	354.2
06-3	Drugs and pharmaceuticals	274.5	279.0	280.1
06-5	Agricultural chemicals and products	274.1	269.6	270.5
06-7	Other chemicals and allied products	283.5	286.5	283.4
07-1	Rubber and rubber products	261.8	259.4	260.0
07-11	Crude rubber	249.1	240.9	243.6
07-13	Miscellaneous rubber products	300.5	300.3	301.0
07-2	Plastic products (June 1978=100)	141.2	140.4	140.6
08-1	Lumber	346.0	348.1	345.8
09-1	Pulp, paper, and products, excluding building paper and board	295.7	300.6	300.6
09-15	Converted paper and paperboard products	289.8	293.7	294.1
10-1	Iron and steel	343.2	343.6	343.7
10-2	Nonferrous metals	258.7	260.9	259.7
11-3	Metalworking machinery and equipment	348.9	349.8	350.0
11-4	General purpose machinery and equipment	326.4	326.8	326.6
11-6	Special industry machinery	373.2	375.2	375.9
11-7	Electrical machinery and equipment	258.2	259.2	258.9
11-9	Miscellaneous machinery and equipment	280.0	280.0	280.6
12-6	Other household durable goods	326.8	327.1	328.3
13-2	Concrete ingredients	338.9	338.3	334.0
14-1	Motor vehicles and equipment	272.0	284.2	282.9
15-1	Toys, sporting goods, small arms, etc	236.8	237.2	234.2
15-4	Photographic equipment and supplies	219.1	220.0	219.8
15-9	Other miscellaneous products	355.5	358.2	357.5

1/ Data for Aug. 1986 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision 4 months after original publication.

2/ Prices of some items in this grouping are lagged 1 month.

Table 4. Producer price indexes for the net output of major mining and manufacturing industry groups

Industry code	Industry 1/	Index base	Index			Unadjusted percent change to Dec. 1986 from:	
			Aug. 1986 2/	Nov. 1986 2/	Dec. 1986 2/	Dec. 1985	Nov. 1986
	Total mining industries	12/84	70.4	71.4	69.0	(3)	-3.4
10	Metal mining	12/84	89.5	93.0	94.2	(3)	1.3
11	Anthracite mining	12/85	97.8	97.9	98.8	-1.2	.9
12	Bituminous coal and lignite mining	12/85	99.4	98.7	98.7	-1.3	0
13	Oil and gas extraction	12/85	68.6	69.4	66.0	-34.0	-4.9
14	Mining and quarrying of non-metallic minerals, except fuels	12/84	104.4	104.6	104.1	1.1	-.5
	Total manufacturing industries	12/84	97.4	98.2	98.2	(3)	0
20	Food and kindred products	12/84	101.7	101.5	101.5	1.8	0
21	Tobacco manufactures	12/84	117.9	118.0	118.0	8.7	0
22	Textile mill products	12/84	100.3	100.4	100.4	.7	0
23	Apparel and other finished products made from fabrics and similar materials	12/84	102.1	102.6	102.3	.4	-.3
24	Lumber and wood products, except furniture	12/84	102.2	102.2	102.0	2.7	-.2
25	Furniture and fixtures	12/84	104.3	104.7	104.7	1.8	0
26	Paper and allied products	12/84	99.9	101.3	101.4	3.6	.1
27	Printing, publishing, and allied industries	12/84	108.0	108.9	108.9	3.9	0
28	Chemicals and allied products	12/84	100.2	100.0	99.6	-1.0	-.4
29	Petroleum refining and related products	12/84	56.1	57.3	58.0	-43.2	1.2
30	Rubber and miscellaneous plastic products	12/84	100.4	100.0	100.1	0	.1
31	Leather and leather products	12/84	102.9	103.4	103.9	1.8	.5
32	Stone, clay, glass, and concrete products	12/84	103.9	103.9	103.8	.8	-.1
33	Primary metal industries	12/84	97.1	97.2	97.1	-1.9	-.1
34	Fabricated metal products, except machinery and transportation equipment	12/84	100.8	101.1	101.1	.2	0
35	Machinery, except electrical	12/84	102.2	102.5	102.5	1.2	0
36	Electrical and electronic machinery, equipment, and supplies	12/84	102.3	102.7	102.7	(3)	0
37	Transportation equipment	12/84	103.7	107.4	107.0	3.1	-.4
38	Measuring and controlling instruments; photographic, medical, and optical goods; watches and clocks	12/84	102.7	103.3	103.3	2.1	0
39	Miscellaneous manufacturing industries	12/85	101.6	102.1	102.0	2.0	-.1

1/ Indexes in this table are derived from the net-output-weighted industry price indexes. Because of differences in coverage and aggregation methodology, they will generally not match the movements of similarly-titled indexes which are derived from traditional commodity groupings.

2/ Data for Aug. 1986 have been revised to reflect the availability of late reports and corrections by respondents. All data are subject to revision four months after original publication. Data are not seasonally adjusted.

3/ Not available.

Senator SARBANES. Well, thank you very much, Commissioner. What was the civilian unemployment rate for 1986? Do you have the figure for the year 1986?

Mrs. NORWOOD. 7.0 percent.

Senator SARBANES. If you could look back, when was the last time we had an annual unemployment rate at 7 percent or below?

Mrs. NORWOOD. 1979, Mr. Plewes tells me.

Senator SARBANES. And then the rate was——

Mrs. NORWOOD. We don't have all of the annual averages with us. I think it was 5.8 percent.

Senator SARBANES. So it was 5.8 percent in 1979 and in 1980?

Mr. PLEWES. 7.1 percent.

Senator SARBANES. Then could you just follow it down to the present.

Mr. PLEWES. In 1981 it was 7.6 percent; in 1982 it was 9.7; in 1983 it was 9.6; in 1984 it was 7.5; in 1985 it was 7.2; in 1986 it was 7.0.

Senator SARBANES. So for the year of 1979 we had an unemployment rate of 5.8 percent?

Mrs. NORWOOD. As you know, that was an extraordinarily good year at the labor market.

Senator SARBANES. Then it went to 7.1 in 1980 and 7.6 in 1981, and then we had, of course, the depression or the deep recession of 1982–83 where we went to 9.7 and 9.6 percent in 2 successive years, as I recall, the highest unemployment since the depression years of the 1930's; is that correct?

Mrs. NORWOOD. Yes.

Senator SARBANES. And we have now come down to 7 percent, which is in effect back where we were in 1980, roughly, one-tenth of a point lower than in 1980?

Mr. PLEWES. Yes.

Senator SARBANES. You commented on the fact that the producer prices have remained stable and that this was remarkable for the 5th year of a recovery. But is it fair to say that the recovery we have experienced has been less in its magnitude than recoveries which took place in earlier economic cycles, certainly at least as far as the unemployment figure is concerned?

Mrs. NORWOOD. If we compare it with the recovery that is closest, that of the late 1970's, there has been a much sharper decline in unemployment, but it was very much higher to begin with. Otherwise, there has been less growth generally.

Senator SARBANES. On the growth, as I read your figures, we had a monthly gain in employment this past month of 205,000 jobs; is that correct?

Mrs. NORWOOD. In the household survey, yes. Roughly, 200,000 to 270,000 or so in the establishment survey. It's somewhere around there. You're quite correct.

Senator SARBANES. Now that's about the average monthly gain in unemployment in 1986, is that correct?

Mrs. NORWOOD. Yes. I think what you're getting at is that the employment growth has only been about enough to keep up with the increase in the labor force.

Senator SARBANES. I was really getting at a point beyond that, which was that with an unemployment growth this month that was the average of the year, we got a drop of a couple tenths of a point in the employment rate, whereas in other months with a roughly comparable growth we got no change in the unemployment rate.

So the question is, How do you explain the combination of an average gain in employment with a decline in the unemployment rate?

Mrs. NORWOOD. Well, because of the slower growth in the labor force. As you know, people are classified either as employed, out of the labor force, or unemployed, and we had a flat labor force last month. It declined very slightly, but not in a statistically significant manner, and we had employment growth.

Senator SARBANES. What explains the flat labor force last month?

Mrs. NORWOOD. Well, that's something I'm not sure about. As you know, there are a lot of developments that occur in the Christmas season. There usually is a very sharp decline in just about all of the numbers at this time of the year. This year there seem to have been, certainly in retail trade, somewhat weaker employment performance than is usual, and that may be merely that there's more efficiency in the use of labor in stores. There are longer lines, it seems to me, in many places when one wanted to go buy something. But it's hard to tell and I think we need a few more months to see what is happening. This is only 1 month.

Senator SARBANES. Last year the civilian labor force rose by 2.3 million, is that correct?

Mrs. NORWOOD. Yes.

Senator SARBANES. How does this compare with the average increase in the labor force over the last 10 years?

Mrs. NORWOOD. Well, as we have discussed before, the labor force growth has been slowing and it is far less than it was during the 1970's. That is largely because of the changing number of young people and the fact that while women continue to enter the labor force in large numbers, it is at a slower rate of increase than before.

Senator SARBANES. I think most economists now seem to take the view that with the final GNP figure in for 1986, the economy grew at about 2.6 percent.

Mrs. NORWOOD. Yes.

Senator SARBANES. And with this growth rate we made little improvement in the unemployment rate over the course of that year.

Mrs. NORWOOD. That's correct.

Senator SARBANES. And I take it the current consensus among forecasters is that the GNP will grow about 2.5 percent in this coming year. Of course, that's always a hazardous enterprise to predict.

If the economy were to grow at 2.5 percent in 1987, what would you expect the effect of that to be on the unemployment rate?

Mrs. NORWOOD. Obviously, the more vigorous the GNP growth, the easier it is to reduce unemployment. I think that it is generally agreed that to have sizable reductions in unemployment you need a very vigorous GNP growth. A growth rate of 2.5 to 3 percent is fairly moderate, but a great deal will depend upon expectations, upon our trade position, and upon the behavior of labor force participation.

Senator Sarbanes. What are your expectations with respect to labor force participation?

Mrs. Norwood. We anticipate that women will continue to enter the labor force in large numbers but at a somewhat slower pace—we saw that last year.

Young people—there are fewer of them than there were in the 1970's and so fewer of them are entering the labor force. But I think that a large part of the decisions that people make are based on where the growth is, on the particular geographic areas in which they live. We have got enormous disparity from one area to another in this country, particularly in the labor market. So it's hard to generalize, but we do not expect the vigorous growth that we had in the 1970's.

Senator Sarbanes. You talked about people entering the labor force and you mentioned women and young people. What about people leaving the labor force?

Mrs. Norwood. Well, there is clearly a long-term trend for adult men to be retiring earlier, and our work shows that, at least in the past, legislation which prohibits mandatory retirement had very little effect on that trend.

I think that retirement decisions depend in large part on what happens to pensions in general, but in many of our manufacturing establishments one of the ways they are trying to cut back their work forces is to provide some kind of incentive for earlier retirement. Also, as plants close down, some of the older workers have to leave and they don't find new work. They subsequently may drop out of the labor force. That happens to some women, too. We found in our survey of displaced workers, for example, that some of the older workers dropped out of the labor force. Some of the women from textile plants, for example, and apparel plants, also dropped out of the labor force.

Senator Sarbanes. On the discouraged workers, a phenomenon which also constitutes, I take it, a dropping out from the labor force——

Mrs. Norwood. Yes.

Senator Sarbanes. That figure is at 1.1 million, is that correct?

Mrs. Norwood. Yes, that's correct.

Senator Sarbanes. How does that compare historically, in terms of its level?

Mrs. Norwood. It's down from the recession, but it is higher than in the 1970's, as is the number of part-time workers for economic reasons.

Senator Sarbanes. Let me put the question this way. Are the levels of discouraged and part-time workers for economic reasons at a high level, given that we are in the latter year of a recovery?

Mrs. Norwood. Yes. They are very sticky numbers.

Senator Sarbanes. When you use the term "part-time" workers, what's your definition?

Mrs. Norwood. There are two kinds of part-time workers. There are almost 14 million workers who are working part time because they want to work part time, and that's not an economic problem. But there are 5.6 million workers who are working part time because they are unable to find full-time jobs or because their hours have been cut back, and that group should be a matter of concern.

Senator **Sarbanes**. How much work are we talking about when we define someone as a part-time worker for economic reasons?

Mrs. **Norwood**. Less than 35 hours.

Senator **Sarbanes**. And you said that was 5.5 million workers; correct?

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. Do you have them on a scale, in terms of how much work they are getting?

Mr. **Plewes**. We do have that information. We don't have it here for you, Senator. We can provide it for the record.

Senator **Sarbanes**. I think that would be helpful.

Mr. **Plewes**. We have hours, yes.

[The following information was subsequently supplied for the record:]

HOUSEHOLD DATA$\$HOUSEHOLD DATA
ANNUAL AVERAGES$\$ANNUAL AVERAGES

30. Persons at work by hours of work and type of industry

Hours of work	1986					
	Thousands of persons			Percent distribution		
	All industries	Agriculture	Nonagricultural industries	All industries	Agriculture	Nonagricultural industries
Total, 16 years and over	103,857	3,036	100,821	100.0	100.0	100.0
1 to 34 hours	25,227	877	24,350	24.3	28.9	24.2
1 to 4 hours	793	50	743	.8	1.6	.7
5 to 14 hours	4,438	221	4,217	4.3	7.3	4.2
15 to 29 hours	12,455	410	12,045	12.0	13.5	11.9
30 to 34 hours	7,541	196	7,345	7.3	6.5	7.3
35 hours and over	78,630	2,158	76,471	75.7	71.1	75.8
35 to 39 hours	7,003	147	6,855	6.7	4.8	6.8
40 hours	42,204	604	41,600	40.6	19.9	41.3
41 hours and over	29,423	1,407	28,016	28.3	46.4	27.8
41 to 48 hours	10,770	217	10,553	10.4	7.1	10.5
49 to 59 hours	10,618	394	10,224	10.2	13.0	10.1
60 hours and over	8,035	796	7,239	7.7	26.2	7.2
Average hours, total at work	39.1	44.3	38.9	-	-	-
Average hours, workers on full-time schedules	43.5	51.8	43.3	-	-	-

31. Persons at work 1 to 34 hours by reason for working less than 35 hours, type of industry, and usual status

(Numbers in thousands)

Reason for working less than 35 hours	1986					
	All industries			Nonagricultural industries		
	Total	Usually work full time	Usually work part time	Total	Usually work full time	Usually work part time
Total, 16 years and over	25,227	7,443	17,783	24,350	7,146	17,203
Economic reasons	5,588	1,740	3,848	5,345	1,644	3,701
Slack work	2,456	1,408	1,048	2,305	1,323	982
Material shortages or repairs to plant and equipment	51	51	-	50	50	-
New job started during week	199	199	-	190	190	-
Job terminated during week	82	82	-	80	80	-
Could find only part-time work	2,800	-	2,800	2,719	-	2,719
Other reasons	19,638	5,703	13,935	19,004	5,502	13,502
Does not want, or unavailable for, full-time work	11,625	-	11,625	11,297	-	11,297
Vacation	1,350	1,350	-	1,334	1,334	-
Illness	1,597	1,449	148	1,564	1,426	138
Bad weather	510	510	-	418	418	-
Industrial dispute	9	9	-	9	9	-
Legal or religious holiday	867	867	-	865	865	-
Full time for this job	1,553	-	1,553	1,520	-	1,520
All other reasons	2,127	1,518	609	1,998	1,451	547
Average hours:						
Economic reasons	21.9	24.2	20.9	22.0	24.4	21.0
Other reasons	21.3	26.6	19.2	21.4	26.7	19.2
Worked 10 to 34 hours:						
Economic reasons	1,729	785	944	1,673	753	920
Other reasons	5,812	3,201	2,611	5,672	3,125	2,547

Senator **Sarbanes**. I take it most of them are not at 35 hours but are well below 35 hours?

Mr. **Plewes**. They hover about 20 hours a week.

Senator **Sarbanes**. So they are really working half time, these part-time workers for economic reasons?

Mrs. **Norwood**. That's one of the reasons that when we calculate one of the alternative unemployment rates we assume that the part time for economic reasons is just half time.

Senator **Sarbanes**. When you calculate that 7 percent unemployment rate, the part-time workers for economic reasons are considered as employed, not as unemployed; is that correct?

Mrs. **Norwood**. That's correct. Anyone who works, no matter how many hours, except for unpaid family workers, is included in the employed category.

Senator **Sarbanes**. So if you're someone looking for a job and you get something for 10 or 12 hours a week you are employed as far as the unemployment figures are concerned. Even if you want to work full time, want a regular full-time job but get just a few hours work a week and pick up a little bit of income, you are regarded as employed, not as unemployed?

Mrs. **Norwood**. That's correct and that's one of the reasons that we keep emphasizing that the unemployment data really are not always a measure of economic hardship.

Senator **Sarbanes**. Do you have an index which factors in the part-time workers for economic reasons on the assumption, I guess, that they would want to work a 40-hour week, and then estimate what the unemployment rate would be if you took into account the fact that someone working 10 hours a week is in a sense three-quarters unemployed and only one-quarter employed? If you factor these people in, what unemployment rate do you get?

Mrs. **Norwood**. You would get 9.1 percent in December.

Senator **Sarbanes**. 9.1 percent.

Mrs. **Norwood**. That's including all the full-time jobseekers, plus half of the part-time jobseekers, plus half of the group who were working part time for economic reasons. And then we have another rate which includes, in addition to those groups, the discouraged workers that were not looking at all, and that's calculated on a quarterly basis and for the last quarter that was 10.2 percent.

Senator **Sarbanes**. So if you factor in the people who are working part time for economic reasons but want to work full time, you get a 9.1 percent unemployment rate. Then, if, in addition, you factor in the people who are in effect so discouraged they have dropped out of even looking for a job, you get 10.2 percent?

Mrs. **Norwood**. That's correct.

Senator **Sarbanes**. Senator Melcher.

Senator **Melcher**. Commissioner Norwood, do you think this is a bullish report?

Mrs. **Norwood**. I always like to report data that show that things are improving. I try not to characterize them, however. I leave that to you.

Senator **Melcher**. Well, is a report where the data are improving bullish?

Mrs. **Norwood**. Well, it's certainly better than not to be improving. Yes, I think that these are good data.

Senator **Melcher**. All right. How does it fit in with the record Federal deficit? It is bullish because we are spending money that creates employment, industrial activity, and economic activity?

Mrs. **Norwood**. The state of the economy is obviously very much affected by fiscal and monetary policy. We have defense expenditures which create jobs and we have other expenditures which create jobs. So to that extent, the expanionist fiscal policies that we have been following should be creating jobs quite clearly.

Senator **Melcher**. Does the answer mean that—you know, I'm new on this Joint Economic Committee.

Mrs. **Norwood**. We are delighted to have you.

Senator **Melcher**. You will have patience with me I trust as I ask these questions. Does your response mean that because we are spending some $200 billion more than we are taking in that we have set the stage for this rather bullish report?

Mrs. **Norwood**. Well, I cannot ascribe causal relationships but it is quite clear to me and I think to every economist that expansionary policies should result in more jobs.

Senator **Melcher**. If we spent $200 billion more out of the Federal Treasury, would we have this same report?

Mrs. **Norwood**. I would expect——

Senator **Melcher**. Did I state that right? If we spent $200 billion less out of the Federal Treasury?

Mrs. **Norwood**. Less?

Senator **Melcher**. Less, would we have had this bullish report?

Mrs. **Norwood**. Well, it would have depended on, in the absence of this infusion of Federal funds into the economy, what happened to the private economy, and I don't know. But it is possible that there would be fewer jobs.

Senator **Melcher**. So it would be a higher rate and it wouldn't be a bullish report then?

Mrs. **Norwood**. It wouldn't be as bullish perhaps.

Senator **Melcher**. Well, if this——

Mrs. **Norwood**. Two-tenths drop, you know, we are still at——

Senator **Melcher**. What if it were two-tenths higher? It wouldn't be bullish, would it?

Mrs. **Norwood**. As I said before, I would prefer not to categorize it. We have had a two-tenths drop.

Senator **Melcher**. It wouldn't be a good report? We'll use your lingo.

Mrs. **Norwood**. We've had a two-tenths drop in the unemployment rate. We are still at a very high level. We need to have data for several more months to see whether we are really on a downward trend or whether we will just continue at the current level.

So I think before categorizing the report, we really ought to think about the data in a longer timeframe.

Senator **Melcher**. Well, getting back to the basics, it's a good report, in your judgment—and that would be pretty important judgment—would it be a good report instead of saying 6.8 if it said 7.1? It would not be a good report?

Mrs. **Norwood**. I much prefer to see unemployment go down than to see it go up.

Senator **Melcher**. Well, that isn't the question, though. If it were 7.1 would you describe it as a good report?

Mrs. **Norwood**. As I told you, I prefer not to describe the report as good or bad.

Senator **Melcher**. Well, you just did, Commissioner.

Mrs. **Norwood**. The reason that the Joint Economic Committee is interested in having the Bureau of Labor Statistics' view is because we try to remain as objective as possible. It is better to report data that show that more people are working than to report data that show that more people are unemployed, clearly.

Senator **Melcher**. Well, I hope you will be patient with me, but I want to understand this. I used the word "bullish" and you preferred not to.

Mrs. **Norwood**. Yes.

Senator **Melcher**. But then you brought out the word "good"—it's a "good" report. Now my question is simply this. If it were 7.1, would you describe it as a good report?

Mrs. **Norwood**. I would say that we are remaining at a very high level and if it had gone up I would try to look at where that was happening and again comment to the committee that we would need to look at this in a longer timeframe to see whether that's sustained.

Senator **Melcher**. Now can I conclude that you don't—you know, I'm going to get it one way or the other. It's a good report. That's your term. I don't want to use the word "bad" because that would be ascribing a word to you that you might not like to use. But would you describe it as a good report if it were 7.1?

Mrs. **Norwood**. I really don't think that the Joint Economic Committee needs to have me characterize the report one way or the other.

What you want to know is what has happened. What has happened is that we have had a drop in unemployment now. If we came back next month and said there was an increase in unemployment, that would be important for you to know, too.

Senator **Melcher**. Maybe we ought to strike the word "good." What about even striking the word "good" since I think that's what you prefer to do, and——

Mrs. **Norwood**. Yes, I do. May I just say that when we are talking about people who are unemployed, if the group goes down, there are still people who are without jobs who want them and even if the unemployment rate dropped a great deal, I don't think those people would think this was a good report. So we need to be careful about using adjectives.

Senator **Melcher**. Well, to return to the Federal deficit, I think I can assume from your responses that the fact that there was a high level of spending, including the $200 billion deficit, that that has something to do with this report being a decline in umemployment. Now what about the trade deficit? That's $170 billion. Where does that figure at? How did we get all this improvement if we've got the two key deficits getting larger?

Mrs. **Norwood**. Well, the trade deficit has been having, I believe, two kinds of effects. One is that because of the increased competition and increased imports, our manufacturing establishments have been honing down—they have been attempting to make themselves more efficient and to drop what they may consider to be unnecessary labor in order to produce the product. Our production has not gone down very much and our output has not gone down very much, but employment in manufacturing clearly has gone down quite a lot. So that's one aspect of this issue.

The other, of course, is that trade has had a distinct effect on our price levels and now that exchange rates are finally seeming to take some effect, most economists expect that there will be an increase in our exports. That should help to sustain jobs in the manufacturing establishments.

We have had, of course, a lot of growth. Most of the growth has been in the service-producing sector. That's not unusual for an economy of our type, but that's where the growth has been.

Senator MELCHER. You know, Commissioner, are you familiar with what State I come from?

Mrs. NORWOOD. Yes.

Senator MELCHER. Montana.

Mrs. NORWOOD. Yes. There are serious problems in Montana.

Senator MELCHER. I'll say. Let me tell you a conversation I had with an entrepreneur in Montana. He said, "The tax bill was bad for me." It removed capital gains and apparently he had a balloon payment coming in next year on some property. I think he said it cost him close to a million dollars because capital gains would be gone.

That paints a picture of a fairly affluent person. I said, "How are the kids?" He said, "They're both at home and that's what I really want to talk to you about. The kids are in their mid-20's, out on their own. They're both at home now. The best jobs they can get are something less than 30 hours a week, no way of supporting themselves on that—30 hours a week at low pay at one of the retail outlets that sell average to low priced merchandise of a great variety."

As I understood your answers to Chairman Sarbanes, people employed like that are counted as employed. Is that right?

Mrs. NORWOOD. That's correct.

Senator MELCHER. Did I understand you to say that there are about 5 million of such people that are employed in similar circumstances that really want to work 40 hours in order to attempt to make a living?

Mrs. NORWOOD. And who have not been able to find full-time jobs, yes, 5.5 million.

Senator MELCHER. 5.5 million.

Mrs. NORWOOD. 5.6 million.

Senator MELCHER. Is that a pretty accurate figure?

Mrs. NORWOOD. I believe so.

Senator MELCHER. Has it been going up?

Mrs. NORWOOD. No, it has actually been—it depends on what year you compare it to. It was much, much higher during the very steep recession of 1981-82. It has come down considerably since then, but it is extraordinarily high for the beginning of a 5th year of a recovery.

Senator MELCHER. In other words, ordinarily it would be going down at this stage?

Mrs. NORWOOD. Yes. One would have hoped that at this stage of the business cycle that group would be somewhat lower.

Senator MELCHER. That's pretty flat then.

Mrs. **Norwood**. Yes. You know, we have done a supplement to the current population survey which asked people about multiple job holding, which is another issue that we are very interested in. Some people may not have one full-time job. They may be holding two jobs that may together add up as one full-time job. There has been a large increase in multiple job holding.

That can be both good and bad. Some people may be trying to work two jobs because they can't get along on the lower pay of the first job, but some may be putting—and there is some evidence that some people may be putting two jobs together because that fits their schedules better and they may be satisfied with that. There's a lot of variety out there.

Senator **Melcher**. Nevertheless, this 5.5 million—is it 5.5 million people that you speak of holding jobs at less than 40 hours a week as part-time jobs—they are not included—where they hold two jobs to make a full-time job they're not part of this 5.5 million, are they?

Mrs. **Norwood**. That's right.

Senator **Melcher**. The 5.5 million are actually people unemployed?

Mrs. **Norwood**. They could be called partially unemployed.

Senator **Melcher**. This fellow with these two children, said, "Where is this country going with the trade deficit, the Federal deficit? Even in the 1930's real estate appreciated. It hasn't appreciated in 1986 and it likely won't appreciate in 1987. Nor did it appreciate in 1985."

Is that true?

Mrs. **Norwood**. It may be true in Montana. It is not true in some other parts. It's certainly not true in the Boston area I can tell you.

Senator **Melcher**. He was not citing Montana. He was citing national figures. I just wonder if you know if it's true?

Mrs. **Norwood**. There is a big variety from one area to another. Clearly, in farm and mining communities, asset values have decelerated and really just dropped terribly. In some other central urban areas, housing prices have gone up. So there is a good deal of uncertainty caused by the changes in tax legislation, some of which were retroactive and some of which are only now coming into effect as to what will happen to construction in general, both residential and nonresidential.

Senator **Melcher**. He was citing national figures. Do you have national figures?

Mrs. **Norwood**. I can supply that for the record.

Senator **Melcher**. That's not part of your data?

Mrs. **Norwood**. No.

Senator **Melcher**. Now I want to turn to the inflation comment you made.

Senator **Sarbanes**. Would the Senator yield just a moment?

Senator **Melcher**. Yes.

Senator **Sarbanes**. I think one point that ought to be made here, which refers to past discussions, is that the unemployment figure does not take into account the amount of economic suffering that may take place. A farmer in Montana, or for that matter anywhere else, or a small businessman close to bankruptcy, are regarded as employed so long as they are still struggling to get by; is that correct?

Mrs. **Norwood**. That's right. So long as he reports that he is working and that he is not looking for work.

Senator **Sarbanes**. It's only when he goes under, so to speak, when he crosses that final line and closes up shop or a farm that he then becomes an unemployment figure?

Mrs. **Norwood**. Even then, Senator Sarbanes, there are a lot of farmers who are in great difficulty, of course, and therefore have some job off the farm. So if the farmer were to go under and still keep the small job or part-time job that he has off the farm, he would still be counted as employed.

What we try to do in our labor force survey is to collect data—what we would call hard data. We try to obtain specific information. You ask someone if he or she is working, has worked for 1 hour or more during the survey week. That's a specific kind of question and that's one of the reasons that the data on discouraged workers—which relate to a state of mind—is something that we collect but don't include in the unemployment rate.

Senator **Sarbanes**. Thank you.

Senator **Melcher**. I want to turn to the portion of your testimony that deals with inflation, the Producer Price Index.

The industries that we have in Montana, our major industries, of course, are basic to the country—agriculture, forest products, mining metals, and energy. If we have economic recovery for these basic industries, the prices would be increased. What impact might that have on the Producer Price Index rate of inflation?

Mrs. **Norwood**. An increase in farm prices would clearly raise the Producer Price Index to some extent and would raise consumer prices, particularly food prices.

Senator **Melcher**. And energy—the same?

Mrs. **Norwood**. Well, yes, if there is a large increase in energy. We certainly saw that in the 1970's.

Senator **Melcher**. Would $4 a barrel for oil be a large increase?

Mrs. **Norwood**. Pardon me.

Senator **Melcher**. Would $4 a barrel for oil be a large increase?

Mr. **Dalton**. $4 a barrel would show up in the figures. I can't recall offhand what the equivalency is for dollars per barrel to the index, but I think it's roughly a tenth of a percent on the CPI on all items for a dollar increase.

Senator **Melcher**. So it would be four-tenths?

Mr. **Dalton**. I think so.

Senator **Melcher**. And metals—I think you mentioned aluminum being about the same average price as it was in 1985; copper, the same. Lumber you say is about the same average, 1986 over 1985?

Mr. **Dalton**. That's on average for the entire category of intermediate goods.

Senator **Melcher**. Is that lumber?

Mr. **Dalton**. Lumber is in that group. Specifically whether lumber is at its level of 1984 or not, I don't know; but on average that group of intermediate goods is now at the level it was in December 1984.

Mrs. **Norwood**. I can tell you that, for example, hardwood lumber is really about 5 percent above the level of last year. Softwood lumber is 6.5 percent above that level. Mill work is 1.8 percent above the level of last year and plywood only 1.3 percent. Wood pulp is up quite a lot.

Senator **Melcher**. So somehow we've got inflation holding steady simply because basic industries such as energy and forest products and agriculture have gone down and the noncrude minerals have gone down over the past several years and are staying down. So, if we are to have a recovery, as we must, I believe we have to have a recovery in these basic industries for the health of the general economy. Don't we have to have a recovery for these basic industries for the long-term general health of the general economy of the United States?

Mrs. **Norwood**. We are seeing a restructuring of industry in this country. Some of our durable manufacturing industries will probably not come back, at least to the extent that they did before, especially in employment. In many cases, they are reducing labor costs significantly and, as a result, should be able to do well with lower prices. But that varies from one place to another and from one industry to another.

For example, we are not seeing that sort of thing happening in automobiles where prices are continuing to go up in spite of some of the competitive pressures.

Senator **Melcher**. Now let's take energy, just one of these basic industries.

Mrs. **Norwood**. Energy, of course, is something that is largely out of our control. It depends in large part on whether the decisions taken by the OPEC group of countries really stick and there is a lot of speculation that it may not by people who know much more about that than I do. It is very clear that the double-digit inflation that we had in the 1970's was very much affected by the upward pull of energy prices and it is also clear that a significant part of our good—I shouldn't use that word—of our lower price performance—our decelerated inflation in recent years has been the result of downward pull from energy prices. That's quite clear.

Senator **Melcher**. Commissioner, I notice you always use the term "double-digit" inflation. I think we ought to use somewhere in the range of where we are at now as compared to double-digit. In other words, what are we at in inflation—about 2? All right. Let's use somewhere between 2 and 9.

The increase in oil prices by $4 a barrel described, if you use that rule of thumb, is four-tenths of 1 percent. What if agricultural commodities went up 10 or 15 percent average in price? Do we have any rule of thumb there?

Mrs. **Norwood**. No, I don't think so, because a lot of this depends on the interaction of these forces. If oil prices go up, for example, then that generally flows through the economy and that's really what happened in the 1970's.

One has to look at all the secondary effects as well. We have found through many years of attempting to analyze price data that one does not always see price changing through from the various stages of process—crude, intermediate, and finished—right into consumer prices. We may have increases in the producer price area in producer prices which are not necessarily reflected—at least not very quickly—in consumer prices.

There are a lot of adjustments that are made. So one needs to look very specifically at each situation. As I said in my statement, it's quite clear that there are some elements of the price deceleration that are causing great difficulty for some groups of the population.

Senator MELCHER. I'm trying to look at the—if there's going to be economic recovery in basic industries the price increase is the only way they are going to get economic recovery for mining, agriculture, forest products, or energy.

Mrs. NORWOOD. Well, on manufacturing, I would expect that recovery increases in sales of manufactured products will probably only take place if we become more competitive, and I think that is one of the things that is happening with the industry restructuring that we are seeing.

Senator MELCHER. I'll go on. If we're going to get the price improvement or economic recovery, we've got to have the price improvement for these basic industries. So I would suspect then we would be talking about an inflationary rate somewhere above 2 percent and perhaps less than 9 percent. I don't want to lead you into making a projection that you can't work up from your data on some sort of figures. But isn't that what we need in this country, some recovery in these basic industries, and therefore, a higher rate which will automatically relate to a higher rate of inflation?

Mrs. NORWOOD. I think we need continued growth of jobs and I think we need also to have programs to help people who are not able to cope in the labor market. I would hope that we do not need—in order to do these things, I would hope that we do not need to rekindle inflation.

Senator MELCHER. Well, that's a hope. If we're going to create—you're not writing off these basic industries at all, as I understand your responses. You're just saying tighten your belt and get more efficient.

Mrs. NORWOOD. What I'm saying is that we seem to be keeping up production with fewer people. That's a problem for us because there's an adjustment process. We are still maintaining our output but there are many people who are in great difficulty. I would be the first to underscore that.

Senator MELCHER. Well, I will return to where I was. You're not writing off the basic industries such as energy, forest products, agriculture, and minerals; you're just saying that somehow you hope they can survive at lower prices? I think that's fair to say that, based on your comments here.

Mrs. NORWOOD. Senator——

Senator MELCHER. Is that fair to say that, what I have just said?

Mrs. NORWOOD. Senator, I am here to report to you on what our data show and what we know about what's going on in the economy. I am frankly rather pleased that I am not in a position to be here to try to tell you what to do about it. That I leave to the very good judgment of the Congress.

Senator MELCHER. Thank you very much. You're so generous. Thank you, Mr. Chairman.

Senator **Sarbanes**. I have just a few questions to follow up on some of the questions Senator Melcher was asking. In fact, if the other components of the price index were to turn in a better performance, you could have an increase in the prices in these very hard-hit sectors and still come out overall without an increase in prices, could you not?

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. I don't think I got the answer to one question Senator Melcher asked. A 10 percent increase in the price of agricultural products would, by your estimates, have much of an impact on the Consumer Price Index?

Mr. **Dalton**. Well, if we look at the CPI food component and assume that goes up 10 percent, rather than agricultural prices—the food component is 18.5 percent of the total index. So 10 percent of 18.5 percent would be its impact, roughly 2 percent.

Senator **Sarbanes**. So that would be a 2 percent impact on the CPI?

Mr. **Dalton**. Right.

Senator **Melcher**. Would you yield, Mr. Chairman?

Senator **Sarbanes**. Yes.

Senator **Melcher**. I think we're getting mixed up here. A 10 percent increase in corn prices is one thing and a 10 percent—or what you might project as being a 10 percent improvement in the price of hogs or cattle. All right. Let's just take cattle, a 10 percent improvement in the price of cattle, slaughtered cattle. That will not reflect—well, I guess maybe it would.

Senator **Sarbanes**. No; 18 percent of the Consumer Price Index represents the cost of food purchased by the consumer in the store.

Mr. **Dalton**. That's right.

Senator **Sarbanes**. Now the 10 percent increase we're talking about is not a 10 percent increase in that price. It's a 10 percent increase in the price paid to the original producer.

Mr. **Dalton**. That's why I said let's assume it's a 10 percent increase——

Senator **Sarbanes**. On the 18 percent of the cost of food, what part is made up of the cost paid to the original producers, as distinct from everything else that happens in the chain before the consumer goes to the store? Do we know that?

Mrs. **Norwood**. Mr. Chairman, there have been many people—lots of people who have worked many years trying to look at the flow of price change through the various stages of processing and then into the supermarkets. It's an extraordinarily difficult thing to do and there are a lot of unknowns. We don't really know what happens always or what is going to happen in the future between the time that a product leaves the farm and it arrives on the shelves for people to buy.

And as you quite rightly point out, Senator Melcher, there are great differences. There's a big difference in fruits and vegetables and in meat and fish and we are not equipped I think to do that kind of analysis.

Senator **Melcher**. Mr. Chairman, if you would yield further? I have lost track of how you are keeping your statistics. For a couple of decades your statistics took the market basket—or whatever term you now call it—for food at the retail level.

Mrs. Norwood. That's right.

Senator Melcher. Don't you do that yet?

Mrs. Norwood. Yes, we have done that.

Senator Melcher. Well, you know, I used to look at that and look at what you had for beef.

Mrs. Norwood. All right.

Senator Melcher. You had just what the typical housewife would carry home for the family and you could relate that in—if slaughtered cattle went up $5 a 100, you had a figure.

Mrs. Norwood. No, that's not quite correct.

Senator Melcher. You don't have that any more? You used to. You need to have that figure.

Mrs. Norwood. The Department of Agriculture used to do some changes of that kind. What we can tell you is that in our market basket there no certain cuts of beef, pork and other things. We can tell you that just because of the way in which the index is calculated and the weight of each of those items in the index, we can give you an estimate of what would happen if the price of those cuts of beef went up by 10 percent or by 5 percent or by 20 percent.

But we cannot tell you what happens if the price at the farm for hogs, for example, goes up by any particular percentage. The Department of Agriculture used to do work of that kind and, as I indicated to the chairman, there are a lot of people who try to look at those relationships, but it's extraordinarily difficult and we are not in that business.

Senator Melcher. Well, Mr. Dalton, I will ask you specifically, do you have that historical information? Let's assume that at some point in 1975 when the price of slaughtered cattle averaged $62, $6 higher than they are now, you had a figure for what that costs at the retail level, did you not?

Mr. Dalton. We had figures for what the cost of the various cuts of meat in that basket were—or really what the change in the price of those items was over some period of time.

Senator Melcher. Month by month?

Mr. Dalton. Month by month. The question that we really can't answer with any degree of accuracy is what is the final result in the supermarket of a price increase that takes place at the farm or any much earlier stage of production.

Senator Melcher. Well, you have the historical data. That's all I'm saying.

Mr. Dalton. Yes. Well, we have historical index numbers that cover food in the grocery store and food at the farm level and food at the finished level before retail, and we can look at those relationships. But what we're saying is that we can't, with any degree of accuracy, predict what will happen from a given percentage increase in farm prices—what will happen then to retail prices. That's why I made the asssumption—I wasn't trying to assume away the problem—but I made the assumption that the food component itself went up in the CPI 10 percent and what the impact of that would be.

Senator Sarbanes. But that wasn't the thrust of our question.

Mr. Dalton. Yes, I understand.

Mrs. Norwood. We are not able to answer the thrust of your question.

Senator **Melcher**. But you could relate it to historical data?

Mr. **Dalton**. You could look at the historical relationships, yes.

Mrs. **Norwood**. I'm not sure how valuable that would be in today's world, however.

Senator **Melcher**. Well, I'm sure you would have to make some adjustments.

Mrs. **Norwood**. Well, you've got all kinds of intermediate costs.

Senator **Melcher**. What the rest of the costs came to, but I think maybe the point is simply this: a 10 percent price improvement in slaughtered cattle—and that is the price of what the cattle are worth on the hoof on the farm—might only result in an increase of 1 percent to the consumer.

Mrs. **Norwood**. It's possible. I really don't know.

Senator **Sarbanes**. Or even less if the price paid the original producer is only one-third of the price the consumer pays and the other two-thirds is added on. If you assume that the add-on costs will remain constant, which is not necessarily an unreasonable assumption, then if the producer payments go up by 10 percent, even using your figures, you have about a half a point on the index? Isn't that correct?

Mr. **Dalton**. Well——

Senator **Sarbanes**. Six-tenths of a point?

Mr. **Dalton**. If the raw materials costs, if you will, is a third of the final price and that goes up 10 percent, then I guess it's roughly 3.3 that you would get in the final product—3.3 percent increase after it's been through the other intermediate areas—transportation, retail, et cetera.

Mrs. **Norwood**. But we know that there have been considerable shifts in the cost of the intermediate points when looking at things historically. Trucking costs, for example, have gone up a great deal. There are a variety of ways in which when a price increase occurs some of it is passed on, some of it is not passed on, depending upon the particular economic conditions of the moment. All we are saying is that we are measuring prices at the producer level, we are measuring prices at the consumer level, and those relationships and those forecasts are things that we cannot help you very much with.

Senator **Sarbanes**. Let me ask you, do you maintain figures on the benefits workers are receiving? In other words, how many of them have health insurance coverage?

Mrs. **Norwood**. Yes. We have a level of benefits survey which finds out about the incidence of fringe benefits—life insurance, health insurance, other things—in the larger establishments. That does not go down to the small establishments. We cut it off at 100 employees.

We also have had in the past and have been considering in the future the possibility of adding some questions to the current population survey, particularly on some of the issues that appear to be important now.

Senator **Sarbanes**. Are there any trends as to what's happening in that area?

Mr. **Stelluto**. In the intermediate and large establishments, yes. We have had that annual survey since 1979 and we have data now from 1979 through 1985 and the 1986 data will be out this spring in preliminary form. So there are trend data.

Mrs. NORWOOD. We will supply it for the record.

[The following information was subsequently supplied for the record:]

Employee Benefits in Medium and Large Firms, 1985

U.S. Department of Labor
William E. Brock, Secretary

Bureau of Labor Statistics
Janet L. Norwood, Commissioner
July 1986

Bulletin 2262

Preface

This bulletin presents results of a 1985 Bureau of Labor Statistics survey of the incidence and provisions of employee benefit plans in medium and large firms. The survey—the seventh in an annual series—provides representative data for 20.5 million full-time employees in a cross-section of the Nation's private industries. It was initially designed to provide the Office of Personnel Management with information on private sector practices for use in comparisons with benefits of Federal workers. The survey's scope, therefore, is the same as that of an annual Bureau survey of occupational salaries in the private sector—the National Survey of Professional, Administrative, Technical, and Clerical Pay, which provides comparative data for evaluating Federal pay rates for white-collar occupations. Appendix A provides a detailed description of the scope and statistical procedures used in the benefits survey.

The analysis in this bulletin was prepared in the Office of Wages and Industrial Relations by the staff of the Division of Occupational Pay and Employee Benefit Levels. Computer programming and systems design were provided by the Division of Directly Collected Periodic Surveys. The Division of Wage Statistical Methods was responsible for the sample design, nonresponse adjustments, sample error computations, and other statistical procedures. Fieldwork for the survey was directed by the Bureau's Assistant Regional Commissioners for Operations.

Pictured on the cover of this bulletin is *The Optometrist* by Norman Rockwell, reprinted with permission from *The Saturday Evening Post* (c) 1956 by The Curtis Publishing Company.

Contents

Page

Chapter 1. Introduction 1

Chapter 2. Work schedules and paid time off 4
  Work schedules 4
  Paid lunch and rest periods 4
  Paid holidays 4
  Paid vacations 4
  Personal leave 4
  Funeral leave, jury duty leave, and military leave 5

Chapter 3. Disability benefits 11
  Paid sick leave 11
  Sickness and accident insurance 12
  Long-term disability insurance 12

Chapter 4. Health and life insurance 25
  Health insurance 25
  Life insurance 29

Chapter 5. Defined benefit pension plans 49

Chapter 6. Defined contribution plans 72
  Salary reduction plans 73
  Savings and thrift plans 73
  Employee stock ownership plans 74
  Profit sharing plans 74

Chapter 7. Other benefits 81

Charts:

1. Major medical plans: Trends in selected deductible amounts, 1979-85 27
2. Health insurance: Selected types of medical care, 1984-85 28
3. Contributory health insurance: Average monthly employee contributions, 1982-85 30
4. Private defined benefit pension plans: Average replacement rates based on 30 years of service including and excluding Social Security payments 51
5. Private defined benefit pension plans: Distribution of full-time participants by monthly benefits based on earnings of $30,000 in the final year of service 52

Tables:

Introduction

1. Summary: Participation in employee benefit programs, 1985 3

Work schedules and paid time off

2. Work schedules: Number of hours scheduled per week 6

Paid time off:

3. Lunch time: Minutes per day 6
4. Rest time: Minutes per day 6

Contents—Continued

Page

Paid time off—Continued

5. Holidays and vacations: Average number of days . . . 6
6. Holidays: Number of days provided each year . . . 7
7. Holidays: Policy on holidays that fall on a regularly scheduled day off . . . 7
8. Vacations: Amount provided at selected periods of service . . . 8
9. Vacations: Length of service required to take vacation . . . 9
10. Personal leave: Number of days provided per year . . . 9
11. Funeral leave: Number of days available per occurrence . . . 9
12. Jury duty leave: Number of days available per occurrence . . . 10
13. Military leave: Number of days available per year . . . 10

Disability benefits

14. Short-term disability coverage: Participation in sickness and accident insurance plans and paid sick leave plans . . . 14

Paid sick leave:

15. Type of provision . . . 14
16. By provision . . . 15
17. Average number of days at full pay by type of plan . . . 16
18. Annual plans: Average number of days at full pay by accumulation policy and sickness and accident insurance coordination . . . 17
19. Annual plans by unused sick leave policy and carryover provisions . . . 18

Sickness and accident insurance:

20. Type and duration of payments . . . 19
21. Percent of earnings formula by maximum weekly benefit . . . 22
22. Length-of-service requirements for participation . . . 23

Long-term disability insurance:

23. Method of determining payment . . . 23
24. Duration of benefits . . . 24
25. Length-of-service requirements for participation . . . 24

Health and life insurance

Health insurance:

26. Coverage for selected categories of medical care . . . 32
27. Coverage after retirement by benefit provisions and age of retiree . . . 33
28. Basic hospital room and board coverage by type of benefit payments and limits to coverage . . . 34
29. Basic surgical benefits by maximum allowance for selected procedures . . . 35
30. Major medical coverage by amount of deductible and applicable benefit period . . . 36
31. Major medical coverage by coinsurance provisions . . . 37
32. Major medical coverage by maximum benefit provisions . . . 38
33. Dental benefits by extent of coverage for selected procedures . . . 39
34. Dental benefits by deductible provision . . . 40
35. Dental benefits by yearly maximum amount of insurance . . . 40
36. Orthodontic benefits by lifetime maximum amount of coverage . . . 41
37. Mental health benefits by extent of benefits . . . 41
38. Vision benefits by extent of benefits . . . 42
39. Coverage for selected special benefits . . . 42
40. Selected cost containment features . . . 42
41. Contributory plans by type and amount of employee contribution . . . 43
42. Length-of-service requirements for participation . . . 43
43. Funding medium for selected types of coverage . . . 44

Contents—Continued

Page

Tables—Continued

Life insurance:

44. Method of determining amount of basic life insurance and frequency of related coverages ... 45
45. Multiple-of-earnings formulas by amount of basic insurance and maximum coverage provisions ... 46
46. Flat dollar insurance by amount of basic insurance ... 47
47. Length-of-service requirements for participation ... 48
48. Effect of retirement on coverage ... 48

Defined benefit pension plans

49. Method of determining retirement payments ... 56
50. Terminal earnings benefit formulas by type and amount of formula ... 57
51. Terminal earnings benefit formulas by definition of terminal earnings ... 58
52. Career earnings benefit formulas by type and amount of formula ... 59
53. Dollar amount benefit formulas by type and amount of formula ... 59
54. Provision for integration with Social Security benefit ... 60
55. Maximum benefit provisions ... 61
56. Average replacement rates for specified final earnings and years of service ... 62
57. Minimum age and associated service requirements for normal retirement ... 63
58. Minimum age and associated service requirements for early retirement ... 64
59. Early retirement by reduction factor for immediate start of payments ... 65
60. Provisions for disability retirement ... 65
61. Provision for credit for service after age 65 ... 66
62. Ad hoc postretirement annuity increases ... 67
63. Vesting schedules ... 69
64. Provision for postretirement survivor annuity ... 69
65. Provision for preretirement survivor annuity ... 70
66. Age and length-of-service requirements for participation ... 71

Defined contribution plans

67. Retirement and capital accumulation plan coverage ... 75
68. Type of defined contribution and stock plans ... 75
69. Combinations of retirement and capital accumulation plans ... 75
70. Salary reduction plans ... 76

Savings and thrift plans:

71. Age and service requirements for participation ... 76
72. Maximum employee contribution ... 77
73. Pre-tax employee contributions ... 77
74. Provision for employer matching contributions ... 78
75. Provision for investment of employer and employee contributions ... 79
76. Vesting schedules ... 80
77. Provisions for withdrawal of employer contributions ... 80
78. Method of distribution of account at retirement ... 80

Other benefits

79. Percent of employees eligible ... 72

Appendixes:

A. Technical note ... 83
B. Availability of the survey's data base ... 89

Chapter 1. Introduction

The employee benefits survey collects data on employee work schedules and develops information on the incidence and detailed characteristics of 14 private sector employee benefits paid for at least in part by the employer. These include lunch and rest periods, holidays and vacations; personal, funeral, jury duty, military, and sick leave; sickness and accident, long-term disability, health, and life insurance; and private retirement/capital accumulation plans. In addition, data are collected on the incidence of 17 other employee benefits, including severance pay, financial counseling, prepaid legal services, nonproduction bonuses, employee discounts, educational assistance, relocation allowances, and child care. The major findings of the 1985 survey are reported in this bulletin.

The survey covers full-time employees in medium and large establishments (generally those with at least 100 or 250 employees, depending upon the industry). Because data collection is limited to provisions of formal plans, the extent of such benefits as rest periods and personal leave may be understated. Furthermore, the data show the coverage of benefit plans but not the actual use of these benefits; for example, that part of available paid sick leave actually used.

Data are presented separately for three occupational groups— professional-administrative, technical-clerical, and production workers. This bulletin often discusses the first two groups jointly as white-collar workers, in contrast with production or blue-collar workers.

Respondents provide information on the number of workers covered by specified benefit plans. Workers are counted as covered by wholly employer-financed plans that required a minimum amount of service prior to receiving benefits, even if they had not met the minimum service requirement at the time of the survey. Where plans—such as health or life insurance—require an employee to pay part of the cost (contributory plans), workers are counted only if they elect the plan and pay their share of the cost. Data on insured benefit plans and private retirement and capital accumulation plans are thus limited to "participants." Plans for which only administrative costs are paid by the employer are not included in the survey.[1]

Highlights

The great majority of full-time workers within the scope of the survey were provided with health and life insurance and private retirement plans, as well as paid holidays and vacations (table 1). Provisions of many employee benefits differed markedly between white- and blue-collar workers.

On the average, employees received about 10 paid holidays each year. The number of days of paid vacation, increasing with years of service, averaged nearly 16 days at 10 years and 21 days at 20 years. For three other paid leave benefits available to a majority of the employees, funeral leave averaged about 3 days per occurrence and military leave averaged nearly 12 days a year; time off for paid jury duty was usually provided as needed.

Ninety-three percent of all employees had some protection against temporary loss of income due to illness or accident through either sick leave or sickness and accident insurance, or both. Sick leave generally continued the worker's full salary beginning on the first day of an illness or accident, while insured benefits replaced less than full pay and began after an initial waiting period. Most employees also had some protection against extended loss of income due to disability; 48 percent had long-term disability insurance, and 41 percent were covered under private defined benefit pension plans that provided immediate disability benefits.

Virtually all of the participants in health insurance plans were covered for most categories of expenses related to hospital and medical care. Life insurance was provided for nearly all employees, most commonly for an amount equal to annual earnings, rounded to the next $1,000.

Eighty percent of the employees in the survey were covered by defined benefit pension plans, which have formulas for determining an employee's annuity. Benefits were most frequently based on earnings during the last 5 years of employment. Common eligibility requirements for normal retirement were: Age 65 with no specified length-of-service requirement, age 62 with 10 years of service, and 30 years of service with no age requirement. Virtually all covered employees could retire early with a reduced pension, provided they fulfilled minimum age and service requirements (most commonly, age 55 with 10 years of service).

Fifty-three percent of the employees participated in one or more of the following defined contribution plans:

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[1] An exception, however, is made in tables 27 and 48, which tabulate postretirement health and life insurance coverage. Plans under which retirees pay the full cost are included since the guarantee of insurability at group rates is, in itself, considered a benefit.

savings and thrift, employee stock ownership, profit sharing, money purchase pension, or stock bonus plans. Twenty-six percent of the employees were in salary reduction or 401(k) plans. These plans allow participants to reduce their taxable income by channeling part of their salary to retirement funds, deferring income tax until withdrawal.

Free or subsidized parking, and full or partial defrayment of educational expenses were available to at least three-fourths of the employees. Supplemental unemployment benefits, subsidized commuting, prepaid legal services, child care, and company sponsored reimbursement accounts for payment of such items as medical expenses not covered by health insurance were available to less than one-tenth of the employees.

Table 1. Summary: Percent of full-time employees by participation[1] in employee benefit programs, medium and large firms,[2] 1985

Employee benefit program	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Paid:				
Holidays	98	99	100	96
Vacations	99	99	100	99
Personal leave	26	33	37	18
Lunch period	10	3	3	17
Rest time	72	58	70	81
Funeral leave	88	87	89	87
Jury duty leave	92	94	96	89
Military leave	70	77	75	63
Sick leave	67	93	92	41
Sickness and accident insurance	52	30	38	70
Wholly employer financed	43	23	31	61
Partly employer financed	8	7	7	9
Long-term disability insurance	48	64	61	32
Wholly employer financed	38	49	48	27
Partly employer financed	10	15	13	5
Health insurance[3]	96	97	96	96
Employee coverage:				
Wholly employer financed	61	56	51	69
Partly employer financed	35	42	44	27
Family coverage:				
Wholly employer financed	42	36	33	50
Partly employer financed	53	60	62	45
Life insurance	96	97	96	96
Wholly employer financed[4]	86	85	85	87
Partly employer financed	11	12	11	10
Retirement[5]	91	93	93	89
Defined benefit pension	80	81	82	78
Wholly employer financed[4]	72	72	76	70
Partly employer financed	8	9	6	8
Defined contribution plan	41	49	49	32
Wholly employer financed[6]	28	32	32	24
Partly employer financed	13	17	17	8
Capital accumulation[7]	20	29	26	13
Wholly employer financed[6]	3	4	4	3
Partly employer financed	17	26	21	11

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[1] Participants are workers covered by a paid time off, insurance, retirement, or capital accumulation plan. Employees subject to a minimum service requirement before they are eligible for a benefit are counted as participants even if they have not met the requirement at the time of the survey. If employees are required to pay part of the cost of a benefit, only those who elect the coverage and pay their share are counted as participants. Benefits for which the employee must pay the full premium are outside the scope of the survey. Only current employees are counted as participants; retirees are excluded.

[2] See appendix A for scope of study and definitions of occupational groups.

[3] Includes 0.7 percent of employees in plans that did not offer family coverage.

[4] Includes participants in noncontributory basic plans who may contribute to the cost of supplemental plans in these benefit areas. Supplemental plans are not tabulated in this bulletin.

[5] The total is less than the sum of the individual items because many employees participate in both defined benefit and defined contribution plans. Defined contribution plans include money purchase pension, profit sharing, savings and thrift, stock bonus, and employee stock ownership plans in which employer contributions must remain in the participant's account until retirement age, death, disability, separation from service, age 59 1/2, or hardship.

[6] Employees participating in two or more plans are counted as participants in wholly employer financed plans only if all plans are noncontributory.

[7] Includes plans in which employer contributions may be withdrawn from participant's account prior to retirement age, death, disability, separation from service, age 59 1/2, or hardship. Excludes pure cash profit sharing, stock option, and stock purchase plans.

NOTE: Because of rounding, sums of individual items may not equal totals.

Chapter 2. Work Schedules and Paid Time Off

Time off with pay is available to employees in several different forms and amounts—from daily rest periods to annual vacations of several weeks. In 1985, survey coverage of paid leave benefits was expanded to include provisions for funeral leave, jury duty leave, and military leave.

Work schedules (table 2)

Weekly work schedules of 40 hours applied to 83 percent of the employees covered by the survey.[1] Eighteen percent of the professional-administrative employees, 24 percent of the technical-clerical employees, and 8 percent of the production workers had shorter workweeks. Three percent of the work force was scheduled to work other than a 5-day week.

Paid lunch and rest periods (tables 3 and 4)

Ten percent of the employees received formal paid lunch periods, and 72 percent were provided formal rest time, such as coffee breaks and clean-up time. Both benefits were more common among production employees than among the two other occupational groups.

Production employees who were covered by paid lunch plans usually received 20 or 30 minutes a day, averaging 25 minutes. The 3 percent of white-collar workers eligible averaged 39 minutes of paid lunch time each day. Paid rest time, averaging 26 minutes a day for white-collar employees and 25 minutes per day for production employees, was provided most commonly as two daily breaks of 10 or 15 minutes each.

Paid holidays (tables 5–7)

Virtually all full-time employees in each occupational group were provided paid holidays, averaging 10.1 days per year. Extended holiday plans, such as the Christmas-New Year's Day period provided in the auto industry, floating holidays, and "personal holidays," such as employee birthdays, were included in the holiday plans reported.

When a holiday fell on a scheduled day off, such as a Saturday or Sunday, another day off was regularly granted to 85 percent of the employees. Most of the remaining workers received either another day off or an additional day's pay, depending on when the holiday fell.

Paid vacations (tables 5, 8, and 9)

Virtually all employees in each occupational group were provided paid vacations. At 15 years of service, full-time employees commonly received 20 days of paid vacation annually. Vacation provisions averaged 8.7 days at 1 year, 15.9 days at 10 years, and 22.3 days at 25 years of service; these averages were virtually unchanged since 1980—the first year such estimates were developed. Plans covering professional-administrative employees generally provided more vacation days than those for other employees. Sixty-one percent of the professional-administrative employees, for example, became eligible for at least 15 days of vacation at 5 years of service; this compared with 37 percent of the production employees. Nearly all white-collar employees received their regular salaries or earnings during vacation periods. About seven-eighths of the production employees received such vacation pay; 13 percent were provided vacation payments based on a percentage of annual earnings; and 1 percent received lump-sum payments from vacation funds.

Virtually all employees covered by vacation plans had to work for a specified period before being able to take a vacation. The most prevalent length-of-service requirement was 6 months for white-collar employees and 1 year for production employees.

Sixteen percent of the plan participants were allowed to cash in unused vacation time. This option was offered to 10 percent of the white-collar participants and 23 percent of the production participants.

Anniversary-year bonus vacation days, such as an extra week of vacation at 10 and 20 years of service, were included in the count of regular vacation time. Extended vacation plans, providing 10 to 13 weeks off with pay every 5 years or so in addition to regular vacation, were excluded. These plans are part of collective bargaining agreements negotiated in the aluminum and can industries.

Personal leave (table 10)

Formal personal leave, which allows employees to be absent from work with pay for a variety of reasons not covered by other specific leave plans, was provided to one-fourth of the employees. Slightly over one-third of the white-collar employees received personal leave, nearly twice the proportion of production employees with this benefit. Most commonly, employees provided personal leave were eligible for 1 to 5 days, averaging 3.7 days per year. In cases where personal leave was part of an "annual leave" plan (combined vacation and personal leave) and could not be shown separately, it was reported as vacation time. The survey did not cover the extent of informal personal leave.

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[1] Work schedules include regularly scheduled overtime and paid lunch and rest periods. Overtime hours were excluded from the 1980–1984 surveys.

Funeral leave, jury duty leave, and military leave (tables 11-13)

At least 87 percent of the employees in each occupational group were eligible for paid leave to attend funerals of family members. Four-fifths of the employees received a set number of days per occurrence, averaging 3.2 days. (Three days off were available to a majority of workers in each occupational group.) For 10 percent of the white-collar workers and 3 percent of the blue-collar workers, the number of days off depended upon the employee's length of service. Workers in plans where the number of days off varied by relationship to the deceased were included in the count of workers with a set number of days; the maximum number of days off was reported for each plan with this provision. Nearly one-fifth of the employees were in these plans.

Nine-tenths of the workers were eligible for paid leave while serving as a juror. Paid time off for jury duty was usually provided as needed, commonly making up the difference between the employee's regular pay and the court's jury allowance.

Military leave, providing pay for absence from work to fulfill military training or duty commitments, was available to seven-tenths of the employees. The most common provision was 2 weeks off per year. However, one-fifth of the workers could receive military leave as needed or according to the type of military duty. For workers with a specified number of days off, military leave averaged 11.5 work days per year. Pay for military leave was either regular pay or the difference between regular pay and military pay.

Table 2. Work schedules: Percent of full-time employees by number of hours scheduled per week,[1] medium and large firms, 1985

Work schedule	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
Hours per week:				
Under 35	1	(2)	(2)	2
35	3	4	6	1
Over 35 and under 37.5	1	1	2	1
37.5	7	9	11	3
Over 37.5 and under 40	2	3	4	(2)
40	83	79	75	86
Over 40	3	2	1	4
Hours per week not available	(2)	(2)	(2)	(2)

[1] Work schedule data included regularly scheduled overtime, paid lunch, and paid rest periods. Regularly scheduled overtime was excluded from the 1980-1984 surveys.

[2] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 3. Paid lunch time: Percent of full-time employees by minutes of paid lunch time per day, medium and large firms, 1985

Minutes per day	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
Provided paid lunch time	10	3	3	17
Under 20 minutes	1	(1)	1	1
20 minutes	4	(1)	(1)	7
Over 20 and under 30 minutes	(1)	-	-	(1)
30 minutes	4	1	1	7
Over 30 minutes	1	2	2	1
Number of minutes not available	(1)	-	-	(1)
Not provided paid lunch time	90	97	97	83

[1] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 4. Paid rest time: Percent of full-time employees by minutes of paid rest time per day, medium and large firms, 1985

Minutes per day	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
Provided paid rest time	72	58	70	81
Under 15 minutes	2	1	1	2
15 minutes	4	3	5	3
Over 15 and under 20 minutes	(1)	(1)	(1)	1
20 minutes	25	17	18	33
Over 20 and under 30 minutes	4	2	2	6
30 minutes	34	35	44	29
Over 30 and under 40 minutes	(1)	-	(1)	(1)
40 minutes	1	(1)	(1)	1
Over 40 minutes	2	-	-	5
Number of minutes not available	(1)	(1)	(1)	(1)
Not provided paid rest time	28	42	30	19

[1] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 5. Paid holidays and vacations: Average number of days for full-time participants, medium and large firms, 1985

Item	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Paid holidays	10.1	10.2	9.8	10.1
Paid vacation by length of service:				
At 6 months[1]	5.6	6.1	5.7	5.2
At 1 year[1]	8.7	10.1	9.6	7.5
At 3 years	10.4	11.0	10.5	10.1
At 5 years	12.7	13.6	13.1	12.1
At 10 years	15.9	16.5	16.0	15.5
At 15 years	18.6	19.0	18.9	18.2
At 20 years	20.7	21.1	20.7	20.6
At 25 years	22.3	22.7	22.6	22.0
At 30 years[2]	22.9	23.3	23.1	22.5

[1] Prior to 1985, employees receiving vacation days, but none at 6 months or at 1 year of service, were included in computing the averages.

[2] The average (mean) was essentially the same for longer lengths of service.

NOTE: Computation of average included half days and excluded workers with zero holidays or vacation days.

Table 6. Paid holidays: Percent of full-time employees by number of paid holidays provided each year, medium and large firms, 1986

Number of days	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
Provided paid holidays	98	99	100	96
Under 5 days	1	(1)	(1)	2
5 days	2	1	2	1
5 days plus 1 half day	(1)	(1)	(1)	-
6 days	4	4	7	3
6 days plus 1 or 2 half days	(1)	(1)	(1)	(1)
7 days	6	5	5	7
7 days plus 1 or 2 half days	(1)	(1)	1	(1)
8 days	8	7	7	8
8 days plus 1 or more half days	1	1	2	(1)
9 days	11	12	16	9
9 days plus 1 or more half days	1	2	2	(1)
10 days	23	25	23	22
10 days plus 1 or 2 half days	1	1	1	1
11 days	16	18	14	16
11 days plus 1 or 2 half days	1	1	1	(1)
12 days	10	12	10	9
12 days plus 1 or more half days	(1)	(1)	(1)	(1)
13 days	6	7	5	7
13 days plus 1 or more half days	(1)	(1)	(1)	(1)
14 days	5	4	3	7
15 days	1	1	(1)	2
More than 15 days	(1)	(1)	(1)	(1)
Number of days not available	(1)	(1)	-	-
Not provided paid holidays	2	1	(1)	4

[1] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 7. Paid holidays: Percent of full-time participants by policy on holidays that fall on a regularly scheduled day off, medium and large firms, 1986

Holiday policy	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Holiday is not observed	1	1	1	1
Another day off granted	85	91	89	79
Additional day's pay in lieu of holiday	3	1	2	4
Another day off or day's pay, depending on when holiday falls	9	4	5	13
Another day off or holiday not observed, depending on when holiday falls	1	1	2	(1)
Other provision applies[2]	1	(1)	(1)	1
Holiday policy not determinable	1	1	1	1

[1] Less than 0.5 percent.

[2] Includes plans where the policy differs by holiday.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 3. Paid vacations: Percent of full-time employees by amount of paid vacation provided at selected periods of service, medium and large firms, 1985

Vacation policy	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
In plans providing paid vacations[1]	99	99	100	99
At 6 months of service:				
Under 5 days	5	3	4	7
5 days	37	45	47	28
Over 5 and under 10 days	9	15	13	5
10 days	4	5	6	1
Over 10 and under 15 days	(2)	(2)	(2)	(2)
15 days	1	2	(2)	(2)
Over 15 days	1	1	(2)	1
At 1 year of service:				
Under 5 days	(2)	(2)	(2)	-
5 days	30	8	13	50
Over 5 and under 10 days	1	1	1	1
10 days	61	79	81	41
Over 10 and under 15 days	2	2	2	1
15 days	3	7	3	1
Over 15 days	1	2	(2)	1
At 3 years of service:				
5 days	4	1	1	7
Over 5 and under 10 days	2	(2)	(2)	3
10 days	77	76	85	74
Over 10 and under 15 days	8	7	6	10
15 days	6	12	7	3
Over 15 and under 20 days	(2)	(2)	(2)	(2)
20 days	1	2	1	(2)
Over 20 days	1	1	(2)	1
At 5 years of service:				
5 days	(2)	(2)	(2)	1
Over 5 and under 10 days	(2)	-	-	(2)
10 days	45	31	38	55
Over 10 and under 15 days	6	7	6	6
15 days	44	53	52	34
Over 15 and under 20 days	1	2	1	1
20 days	2	5	3	1
Over 20 days	1	1	(2)	1
At 10 years of service:				
5 days	(2)	(2)	(2)	(2)
10 days	6	3	3	9
Over 10 and under 15 days	1	1	(2)	1
15 days	66	61	72	66
Over 15 and under 20 days	7	6	4	10
20 days	17	27	19	10
Over 20 days	2	2	1	2
At 15 years of service:				
5 days	(2)	(2)	(2)	(2)
10 days	3	1	1	4
Over 10 and under 15 days	(2)	(2)	(2)	(2)
15 days	25	19	20	31
Over 15 and under 20 days	4	5	5	3
20 days	62	68	70	56
Over 20 and under 25 days	2	2	2	2
25 days	2	2	1	1
Over 25 days	1	1	1	2
At 20 years of service:				
5 days	(2)	(2)	(2)	(2)
10 days	3	1	1	4
Over 10 and under 15 days	(2)	(2)	(2)	(2)
15 days	10	5	6	13
Over 15 and under 20 days	(2)	(2)	(2)	1
20 days	57	62	68	49
Over 20 and under 25 days	3	4	3	3
25 days	24	24	19	25
Over 25 and under 30 days	1	2	2	1
30 days	(2)	(2)	(2)	(2)
Over 30 days	1	(2)	(2)	2
At 25 years of service:				
5 days	(2)	(2)	(2)	(2)
10 days	3	1	1	4
Over 10 and under 15 days	(2)	(2)	(2)	(2)
15 days	8	5	6	11
Over 15 and under 20 days	(2)	(2)	(2)	(2)
20 days	33	36	36	30
Over 20 and under 25 days	2	4	3	1
25 days	46	47	48	45
Over 25 and under 30 days	2	1	1	2
30 days	4	4	3	4
Over 30 days	1	1	1	2
At 30 years of service:[3]				
5 days	(2)	(2)	(2)	(2)
10 days	3	1	1	4
Over 10 and under 15 days	(2)	(2)	(2)	(2)
15 days	8	5	6	11
Over 15 and under 20 days	(2)	(2)	(2)	(2)
20 days	32	35	35	28
Over 20 and under 25 days	1	2	1	1
25 days	40	40	44	38
Over 25 and under 30 days	2	1	2	2
30 days	11	13	9	11
Over 30 days	2	2	2	3

[1] Employees receiving no paid vacations in their early years of service are included in the overall percentage of workers provided paid vacations; however, they are disregarded in computing the distributions by length of service.

[2] Less than 0.5 percent.

[3] Provisions were virtually the same after longer years of service.

NOTE: Data include anniversary year bonus days and exclude extended vacations. Dash indicates no employees in this category.

Table 9. Paid vacations: Percent of full-time participants by length of service required to take vacation, medium and large firms, 1985

Length of service requirement	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
With service requirement	97	96	97	98
1 month	7	10	9	4
2 months	3	3	2	2
3 months	11	11	12	10
4-5 months	1	1	(1)	2
6 months	35	44	45	26
7-11 months	1	1	2	1
1 year	38	26	26	50
Over 1 year	1	-	(1)	2
Without service requirement	3	4	3	2
Service requirement not determinable	(1)	(1)	(1)	1

[1] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 10. Paid personal leave: Percent of full-time employees by number of paid personal leave days provided per year, medium and large firms, 1985

Number of days	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
Provided personal leave	26	33	37	18
1 day	2	2	3	1
2 days	6	7	10	3
3 days	4	5	4	3
4 days	4	4	6	3
5 days	4	6	6	3
More than 5 days	2	3	3	1
No maximum specified[1]	3	6	4	1
Varies by length of service	2	1	2	2
Not provided personal leave	74	67	63	82

[1] Workers were provided as much personal leave as they needed.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 11. Paid funeral leave: Percent of full-time employees by number of paid funeral leave days available per occurrence, medium and large firms, 1985

Number of days	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
Provided paid funeral leave	88	87	89	87
1 day	1	1	1	1
2 days	3	2	2	3
3 days	63	55	58	70
4 days	3	4	4	3
5 days	9	13	14	5
More than 5 days	(1)	(1)	(1)	(1)
Varies by length of service	6	11	9	3
Number of days not available	1	1	(1)	1
Not provided paid funeral leave	12	13	11	13
Number of days varies by relationship to deceased[2]	18	19	21	16

[1] Less than 0.5 percent.

[2] The maximum number of days provided for any occurrence was included in the distribution of funeral leave days.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 12. Paid jury duty leave: Percent of full-time employees by number of paid jury duty leave days available per occurrence, medium and large firms, 1985

Number of days	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
Provided paid jury duty leave	92	94	96	89
10 days	2	1	2	2
20 days	1	2	1	1
22-30 days	3	3	3	2
Other	1	1	1	2
No maximum specified[1]	85	86	89	82
Number of days not available	1	1	1	1
Not provided paid jury duty leave	8	6	4	11

[1] Jury duty leave is provided as needed.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 13. Paid military leave: Percent of full-time employees by number of paid military leave days available per year, medium and large firms, 1985

Number of days	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
Provided paid military leave	70	77	75	63
5 days	1	1	1	(1)
10 days	39	44	42	36
11-14 days	4	5	5	4
15 days	4	4	5	3
30 days	1	1	1	1
Other days	2	2	2	2
Other[2]	18	20	19	16
Number of days not available	1	1	1	1
Not provided paid military leave	30	23	25	37

[1] Less than 0.5 percent.
[2] Military leave varies by type of duty or is provided as needed.

NOTE: Because of rounding, sums of individual items may not equal totals.

Chapter 3. Disability Benefits

Through paid sick leave or sickness and accident insurance, workers may be protected against loss of income during temporary absences from work due to illness or accident. During extended periods of disability, workers' income may be continued through long-term disability insurance or disability pensions. In 1985, short-term disability protection was available to 93 percent of all employees in the survey through sick leave, sickness and accident insurance, or both. Sick leave usually provides 100 percent of the worker's normal earnings; sickness and accident insurance usually replaces 50 to 67 percent of pay. Long-term disability insurance (LTD), which typically pays 50 or 60 percent of earnings, was available to 48 percent of the employees; 41 percent (some with LTD insurance) were eligible for immediate disability benefits under their pension plans, with payments usually determined by credited service without regard to age.

For 25 percent of the workers, employers provided short-term disability coverage by coordinating sick leave benefits with sickness and accident insurance. This is done by either starting insurance benefits after sick leave pay has ended, or paying both benefits concurrently. When payments are made from both sources, sick leave pay is reduced by the amount of the insurance benefits so that the total benefit does not exceed full salary. Regardless of the method of coordination, employers offering sickness and accident insurance tend to allow fewer sick leave days than those without such insurance. At 5 years of service, for example, annual sick leave plans coordinated with insurance made available an average of 15.6 days at full pay—only half of the days provided by plans without insurance. This gap widened as years of service increased.[1]

Long-term disability insurance payments usually begin after sick leave and sickness and accident insurance are exhausted and continue as long as the person is disabled or until retirement age. Career-ending disabilities may entitle an employee to an immediate pension, or the pension may be deferred until other forms of income, such as LTD insurance, have ceased.

Paid sick leave and LTD insurance were most often provided to white-collar workers, while sickness and accident insurance and immediate disability pension benefits were more prevalent among blue-collar workers.

Paid sick leave (tables 14-19)

Seventy-two percent of the employees covered by paid sick leave plans were allowed a specified number of days per year (annual sick leave plans). Another 21 percent of the participants were provided sick leave benefits for each illness (per-disability plans), while most of the remainder were covered by both annual and per-disability benefits. The number of days of sick leave granted varied widely by the type of sick leave plan as well as by specific provisions of each plan. Within individual plans, the maximum number of days granted is either uniform for all covered employees or increases with seniority.

Because annual sick leave plans do not renew benefits after each illness, two-fifths of the employees covered were allowed to carry over and accumulate unused sick leave from year to year (cumulative plans). Such plans typically granted fewer days per year than plans in which unused days were not accumulated. For example, at 20 years' service, cumulative annual plans averaged 15.8 days at full pay, while noncumulative plans averaged 56.0 days. Three-tenths of the workers with carryover provisions were allowed to accumulate an unlimited amount of sick leave; two-thirds had limits on the amount of sick leave that could be accumulated, ranging from under 10 days to over 130 days; and the remainder had carryover provisions that varied by length of service.

Per-disability sick leave plans generally provided more days of paid leave for an illness than annual plans. The average number of days at full pay was 59.9 at 1 year of service, 78.9 at 5 years of service, 105.3 at 15 years of service, and 129.6 at 25 years of service. Under annual plans, the average number of days available was 15.9 days at 1 year, 25.1 days at 5 years, 37.0 days at 15 years, and 40.6 days at 25 years.

Slightly over one-fifth of sick leave participants, usually under per-disability plans, had partial pay benefits available after full-pay benefits ended. Another 2 percent of the participants had only partial-pay benefits available.

Sick leave plans commonly had a short service requirement, generally 3 months, before new employees became eligible for benefits. Seven-eighths of the participants were in plans providing benefits on the first day of illness to employees with 1 year of service. The remainder typically had to wait 1 to 5 workdays, with the waiting period often decreasing to zero days after 10 years or more of service.

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[1] For further analysis of short-term disability protection, see William J. Wiatrowski, "Employee Income Protection Against Short-term Disabilities," *Monthly Labor Review*, February 1985, pp. 32-38.

Sickness and accident insurance (tables 14, 20–22)

Half of all employees were protected by sickness and accident insurance plans against absences from work due to short-term disabilities. More than four-fifths of the participants had their benefits fully paid by their employer. The one-fifth who were required to contribute toward the cost of coverage most often paid a fixed amount, usually between $2 and $3 a month. Most of the others paid a percent of monthly earnings, or had the cost included in the premium for an insurance package.

Benefit payments under sickness and accident insurance plans were either a percent of employee earnings or a scheduled dollar amount. The percent of earnings was usually fixed—typically between 50 and 67 percent—although percents varying by service and length of disability were also observed. Plans paying a percent of earnings covered 77 percent of the white-collar participants, compared with 35 percent of the blue-collar participants. These earnings-based plans often had a dollar limit on the amount of the weekly benefit available; such limits have risen steadily since they were first recorded in 1981. For example, 33 percent of the participants had maximum weekly benefits of $140 or more in 1981; by 1985, this proportion had increased to 57 percent. Blue-collar workers were the most common recipients of scheduled dollar benefits, which provided either a fixed weekly amount (ranging from under $60 to over $220), or varying weekly benefits (usually based on earnings).

The maximum weeks of coverage for each disability were fixed for all but 7 percent of participants, for whom duration of coverage varied by length of service. Of those participants with benefits lasting for a fixed period, most had 26 weeks of coverage. Other common periods were 13 and 52 weeks.

Four-fifths of the employees with sickness and accident insurance were required to be on the job for a specified minimum time period before they were covered by the plan. Service requirements were usually 1, 2, or 3 months. One percent of the participants were in plans requiring over 1 year of service before coverage.

Sickness and accident insurance, unlike sick leave, usually requires a waiting period before benefits begin. The most common provision requires an employee to be out of work due to illness or injury some short period, usually 3 to 7 days, before payments begin. Waiting periods may be shortened or eliminated entirely for employees involved in an accident or hospitalized.

Workers in two States, New Jersey and New York, are covered by mandatory temporary disability insurance plans that are at least partially employer financed. Both of these State plans pay benefits based on a percentage of the worker's earnings for up to 26 weeks with a limit on the weekly benefit ($145 in New York and $158 in New Jersey during the 1985 survey period).[4]

Long-term disability insurance (tables 23–25)

Long-term disability insurance continues the income of employees during extended periods of disability. Generally, LTD begins after sick leave and sickness and accident insurance are exhausted and continues as long as the employee remains disabled, or until retirement age. If disabled after age 60, however, LTD benefits usually continue for 5 years or to age 70, whichever is earlier.

Forty-eight percent of the employees covered by the study had LTD insurance; one-fifth of the participants were required to contribute toward the cost of the plans. The amount of LTD insurance usually varied by earnings, as did the cost to the employee. When a flat rate was charged, employees usually paid under 0.5 percent of their earnings. In plans charging a monthly amount per $100 of covered earnings, the rate was always less than 80 cents.

Service requirements found in LTD plans were usually more restrictive than for the other insurance benefits. Nearly one-fourth of the participants had service requirements of from 1 year to 3 years or more. Because of the long-term nature of this benefit, more employers restricted eligibility to employees who had demonstrated some attachment to the company.

The degree of participation varied widely among the employee groups, with white-collar workers twice as likely to have LTD insurance as blue-collar workers. However, many employees not covered under LTD insurance are eligible for an immediate disability pension through their retirement plan; two-fifths of the employees (54 percent of the production workers) were covered by immediate disability retirement provisions.

Long-term disability benefits were usually 50 or 60 percent of monthly pay. Most of the plans that pay a percent of predisability earnings had maximum payment limitations—commonly $1,500 to $5,000 a month.

One-fourth of the participants were in plans that provided a benefit which was not a fixed percent of earnings. These formulas differed sharply by employee group. Just over one-quarter of the blue-collar participants were in plans paying a dollar amount that varied by the level of the worker's earnings. In contrast, one-sixth of the white-collar participants were in plans with other benefit formulas—a variable percentage of earnings, a flat dollar amount, or a percent of earnings that varied by length of disability.

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[4] Both States permit an employer to substitute a private plan for the State plan if the benefits provided are at least equivalent. In New York, many employers agree to pay the employee's share of plan costs. California and Rhode Island also have mandated temporary disability insurance plans, but these plans require no employer contribution and, thus, are not included in this survey.

A ceiling on income during disability was a common limitation to LTD payments, regardless of the type of plan. These ceilings affected benefits only if the amount payable from the LTD plan plus income from other sources, such as rehabilitative employment and family Social Security payments, exceeded a specified percentage of predisability earnings (frequently 70 to 75 percent). Nearly seven-tenths of the LTD participants were limited by these income ceilings, by the dollar maximums in plans that pay a percent of earnings, or by a combination of both.

Survivor benefits after the death of the disabled employee were available in plans covering 14 percent of the LTD participants. A lump-sum payment, usually equal to 3 times the monthly LTD benefit, was the most common survivor benefit provided.

Three-tenths of the participants were in LTD plans with special limitations on benefits for mental illness. In most of these cases, benefits were provided for a limited period (usually 24 months), unless the participant was institutionalized. In a few cases, benefits were provided only if the participant was institutionalized, or benefits were provided for a limited period, regardless of institutionalization.

Table 14. Short-term disability coverage: Percent of full-time employees by participation in sickness and accident insurance plans and paid sick leave plans, medium and large firms, 1985

Type of plan	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
With short-term disability coverage	93	96	97	90
Sickness and accident insurance only	26	3	5	49
Wholly employer financed	23	2	4	43
Paid sick leave only	42	66	60	21
Combined sickness and accident insurance/paid sick leave	25	27	33	21
Wholly employer financed	20	20	26	17
Without short-term disability coverage	7	4	3	10

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 15. Paid sick leave: Percent of full-time employees by type of provision, medium and large firms, 1985

Provision	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
Provided sick leave	67	93	92	41
Sick leave provided on:				
An annual basis only[1]	48	59	68	32
A per disability basis only[2]	14	23	16	7
Both an annual and per disability basis	3	4	6	1
As needed basis[3]	2	5	1	1
Other basis[4]	(5)	(5)	1	(5)
Not provided paid sick leave	33	7	8	59

[1] Employees earn a specified number of sick leave days per year. This number may vary by length of service.

[2] Employees earn a specified number of sick leave days for each illness or disability. This number may vary by length of service.

[3] Plan does not specify maximum number of days.

[4] Includes formal plans with provisions that change from a specified number of days per year to a specified number of days per absence after a certain service period.

[5] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 16. Paid sick leave: Percent of full-time employees by sick leave provision, medium and large firms, 1985

Sick leave policy[1]	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
Provided sick leave[2]	67	93	92	41
Sick leave provided annually[3]	51	63	74	33
At 6 months of service:				
Under 5 days	11	9	17	10
5 and under 10 days	18	21	30	10
10 and under 30 days	11	21	17	3
30 and under 60 days	1	2	1	(4)
60 and under 120 days	1	2	(4)	(4)
120 days or more	1	3	1	(4)
At 1 year of service:				
Under 5 days	3	1	3	5
5 and under 10 days	18	14	26	16
10 and under 30 days	24	37	40	9
30 and under 60 days	2	5	3	1
60 and under 120 days	1	3	1	(4)
120 days or more	1	3	1	1
At 5 years of service:				
Under 5 days	2	1	2	3
5 and under 10 days	15	11	20	16
10 and under 30 days	20	27	32	9
30 and under 60 days	7	12	12	2
60 and under 120 days	4	8	6	1
120 days or more	2	6	2	1
At 10 years of service:				
Under 5 days	2	1	2	3
5 and under 10 days	15	10	19	16
10 and under 30 days	18	25	30	8
30 and under 60 days	5	7	8	2
60 and under 120 days	6	11	9	2
120 days or more	5	10	5	1
At 15 years of service:				
Under 5 days	2	1	2	3
5 and under 10 days	15	10	19	16
10 and under 30 days	18	24	30	8
30 and under 60 days	3	5	6	2
60 and under 120 days	6	11	9	2
120 days or more	6	12	8	2
At 20 years of service:				
Under 5 days	2	1	2	3
5 and under 10 days	15	10	19	16
10 and under 30 days	17	24	29	8
30 and under 60 days	3	5	5	2
60 and under 120 days	6	10	8	2
120 days or more	7	14	9	2
At 25 years of service:[5]				
Under 5 days	1	1	2	1
5 and under 10 days	16	10	19	16
10 and under 30 days	17	24	30	8
30 and under 60 days	4	5	5	2
60 and under 120 days	4	6	6	2
120 days or more	9	17	11	3
Sick leave provided on a per disability basis[6]	17	26	23	8
At 6 months of service:				
Under 5 days	(4)	1	1	(4)
5 and under 10 days	4	6	6	1
10 and under 30 days	3	5	6	1
30 and under 60 days	1	1	1	(4)
60 and under 120 days	1	3	1	(4)
120 and under 180 days	3	8	3	1
180 days or more	(4)	1	(4)	(4)
At 1 year of service:				
Under 5 days	1	1	1	(4)
5 and under 10 days	2	3	3	1
10 and under 30 days	5	6	8	2
30 and under 60 days	2	4	2	(4)
60 and under 120 days	1	3	1	(4)
120 and under 180 days	4	8	3	2
180 days or more	(4)	1	(4)	(4)
At 5 years of service:				
Under 10 days	1	1	2	(4)
10 and under 30 days	2	2	3	1
30 and under 60 days	3	4	4	1
60 and under 120 days	6	9	9	3
120 and under 180 days	4	9	4	2
180 days or more	1	2	(4)	(4)
At 10 years of service:				
Under 10 days	1	1	2	(4)
10 and under 30 days	1	1	2	1
30 and under 60 days	1	2	2	(4)
60 and under 120 days	6	9	10	3
120 and under 180 days	5	11	6	2
180 days or more	1	2	1	(4)
At 15 years of service:				
Under 10 days	1	1	2	(4)
10 and under 30 days	1	1	2	1
30 and under 60 days	1	1	1	(4)
60 and under 120 days	4	7	6	1
120 and under 180 days	9	14	10	5
180 days or more	1	3	1	(4)
At 20 years of service:				
Under 10 days	1	1	2	(4)
10 and under 30 days	1	1	2	1
30 and under 60 days	1	1	1	(4)
60 and under 120 days	4	7	6	1
120 and under 180 days	6	12	6	2
180 days or more	4	6	5	2
At 25 years of service:[5]				
Under 10 days	1	1	2	(4)
10 and under 30 days	1	1	2	1
30 and under 60 days	1	1	1	(4)
60 and under 120 days	3	5	6	1
120 and under 180 days	6	13	7	3
180 days or more	4	6	5	2
As needed basis[7]	2	5	1	1
Other basis[8]	(4)	(4)	1	(4)
Not provided paid sick leave	33	7	8	59

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[1] Some plans grant sick leave at partial pay, either in addition or as an alternative to full-pay provisions. Employees receiving partial pay only or no sick leave in their early years of service are included in the overall percentages of workers provided sick leave; however, they are disregarded in computing the distributions by length of service.

[2] The total is less than the sum of the individual breakdowns because some employees had annual and per disability plans.

[3] Employees earn a specified number of sick leave days per year. This number may vary by length of service.

[4] Less than 0.5 percent.

[5] Provisions were virtually the same after longer years of service.

[6] Employees earn a specified number of sick leave days for each illness or disability. This number may vary by length of service.

[7] Plan does not specify maximum number of days.

[8] Includes formal plans with provisions that change from a specified number of days per year to a specified number of days per absence.

Table 17. Paid sick leave: Average number of days at full pay for full-time participants by type of plan, medium and large firms, 1985

Item	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Paid annual sick leave[1] by length of service:				
At 6 months	11.9	17.1	9.0	8.5
At 1 year	15.9	22.8	13.3	11.1
At 3 years	19.8	28.1	18.0	12.9
At 5 years	25.1	36.0	23.3	15.4
At 10 years	32.6	46.2	31.4	19.6
At 15 years	37.0	51.8	36.0	22.6
At 20 years	39.4	56.0	38.6	23.8
At 25 years	40.6	56.7	39.7	24.6
At 30 years[2]	41.1	57.3	40.2	24.9
Paid per disability sick leave[3] by length of service:				
At 6 months	54.1	66.4	38.2	47.2
At 1 year	59.9	71.1	43.3	59.4
At 3 years	63.3	75.0	49.2	59.4
At 5 years	78.9	86.1	66.7	77.5
At 10 years	91.3	102.3	81.0	83.4
At 15 years	105.3	112.2	95.5	105.3
At 20 years	117.6	120.7	107.8	126.0
At 25 years	129.6	128.7	119.8	146.4
At 30 years[2]	129.7	128.8	119.9	146.4

[1] Employees earn a specified number of sick leave days per year. This number may vary by length of service.

[2] The average (mean) was virtually the same after longer years of service.

[3] Employees earn a specified number of sick leave days for each illness or disability. This number may vary by length of service.

NOTE: Computation of average excluded days paid at partial pay and workers with only partial pay days or zero days of sick leave.

Table 18. Paid annual sick leave:[1] Average number of days at full pay for full-time participants by accumulation policy and sickness and accident insurance coordination, medium and large firms, 1986

Item	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
At 1 year of service:				
Cumulative plan	9.6	11.6	9.8	7.7
With sickness and accident insurance	7.4	9.3	8.4	5.6
Without sickness and accident insurance	11.2	12.7	10.8	10.0
Noncumulative plan	20.3	28.9	16.1	13.9
With sickness and accident insurance	12.6	20.4	12.0	6.6
Without sickness and accident insurance	25.7	33.3	18.5	22.9
At 5 years of service:				
Cumulative plan	12.2	15.3	13.0	8.8
With sickness and accident insurance	9.7	13.1	12.1	6.2
Without sickness and accident insurance	14.1	16.4	13.5	12.0
Noncumulative plan	34.2	47.2	31.5	20.9
With sickness and accident insurance	19.9	32.6	20.7	3.7
Without sickness and accident insurance	44.5	54.7	37.8	36.0
At 10 years of service:				
Cumulative plan	14.8	18.5	16.0	10.4
With sickness and accident insurance	11.8	15.6	15.5	7.2
Without sickness and accident insurance	17.0	20.0	18.4	14.3
At 10 years of service:—Continued				
Noncumulative plan	45.2	61.2	43.4	27.2
With sickness and accident insurance	27.3	43.8	31.2	12.4
Without sickness and accident insurance	58.1	70.3	50.6	47.0
At 20 years of service:				
Cumulative plan	15.8	19.6	17.2	11.2
With sickness and accident insurance	12.8	16.5	17.2	7.5
Without sickness and accident insurance	18.1	21.1	17.2	15.6
Noncumulative plan	56.0	74.2	56.4	34.1
With sickness and accident insurance	34.7	54.6	41.1	15.3
Without sickness and accident insurance	71.4	84.4	63.7	58.1
At 25 years of service:				
Cumulative plan	15.9	19.6	17.2	11.3
With sickness and accident insurance	12.9	16.5	17.2	7.8
Without sickness and accident insurance	18.1	21.2	17.2	15.7
Noncumulative plan	58.0	76.7	57.4	35.5
With sickness and accident insurance	36.6	57.1	43.7	18.3
Without sickness and accident insurance	73.4	88.9	65.3	61.0

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[1] Paid sick leave plans with a specified number of days available each year. Per disability plans were excluded from this table because (1) only one-fifth of the employees with per disability plans were also covered under a sickness and accident insurance plan and (2) only annual sick leave plans allow the employee to carry over and accumulate unused sick leave from one year to the next year. Instead, the number of days of paid leave under a per disability plan is renewed for each illness or disability after the employee returns to work for a specified period. Data on per disability plans are presented in table 17.

NOTE: Computation of average excluded days paid at partial pay and workers with only partial pay days or zero days of sick leave.

Table 19. Paid annual sick leave: Percent of full-time participants by unused sick leave policy and carryover provisions, medium and large firms, 1985

Unused sick leave policy and carryover provisions	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Unused sick leave policy				
Total	100	100	100	100
Carryover only	35	32	39	34
Cash-in only	9	3	6	20
Carryover and cash-in	6	3	5	10
Unused benefit lost	49	62	50	35
Data not available	1	1	(1)	1
Carryover provisions				
Total	100	100	100	100
Unlimited accumulation	30	33	31	26
Limit on total number of days accumulated	67	61	67	71
Under 10 days	5	2	4	9
10 days	3	2	2	4
11 - 19 days	4	1	5	5
20 days	6	2	3	11
21 - 24 days	1	1	1	1
25 days	2	1	2	3
26 - 49 days	10	7	10	14
50 days	1	1	1	1
51 - 64 days	4	3	5	3
65 days	5	8	5	2
66 - 129 days	12	16	14	8
130 days	8	9	10	4
Over 130 days	5	4	5	6
Days not available	1	2	1	(1)
Other[2]	2	4	1	(1)
Data not available	1	2	(1)	1

[1] Less than 0.5 percent.

[2] Carryover provisions vary by length of service.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 20. Sickness and accident insurance: Percent of full-time participants by type and duration of payments, medium and large firms, 1985

Type of payment	Total	Maximum weeks of coverage								No maximum
		Less than 13	13	14-25	26	27-51	52	Greater than 52	Varies by service	
All participants										
All types	100	2	11	6	57	2	15	(1)	7	(1)
Fixed percent of earnings	44	1	4	4	32	1	1	(1)	3	(1)
Less than 50	(1)	-	(1)	-	(1)	(1)	-	-	(1)	-
50	16	(1)	1	2	12	-	(1)	-	(1)	(1)
55	(1)	-	-	-	(1)	(1)	-	-	-	-
60	13	(1)	(1)	1	9	(1)	(1)	-	2	-
62	(1)	-	-	-	(1)	-	-	-	-	-
65	2	(1)	-	1	1	-	-	-	(1)	-
66	(1)	-	-	-	(1)	-	-	-	-	-
67	9	(1)	1	-	7	(1)	(1)	(1)	-	(1)
70	2	-	(1)	(1)	1	-	-	-	(1)	-
75	1	-	(1)	(1)	(1)	(1)	-	(1)	(1)	-
80	1	-	-	-	1	-	-	-	-	-
Percent of earnings varies	5	-	(1)	(1)	2	(1)	2	-	1	-
By service	2	-	-	(1)	1	-	1	-	-	-
By length of disability	1	-	(1)	-	(1)	(1)	1	-	-	-
By both service and length of disability	1	-	-	(1)	1	-	-	-	1	-
Fixed weekly dollar benefit	27	1	7	1	14	1	2	-	1	-
Less than $60	5	(1)	2	(1)	3	(1)	-	-	-	-
$60-$79	3	-	2	(1)	1	(1)	(1)	-	(1)	-
$80-$99	2	(1)	(1)	-	1	-	(1)	-	-	-
$100-$119	4	1	1	1	2	-	(1)	-	-	-
$120-$139	3	(1)	1	(1)	2	(1)	(1)	-	-	-
$140-$159	3	-	(1)	-	2	(1)	(1)	-	-	-
$160-$179	2	-	-	-	2	-	(1)	-	(1)	-
$180-$199	2	-	(1)	(1)	1	(1)	1	-	1	-
$200-$219	1	-	(1)	-	1	-	-	-	-	-
$220 or more	1	-	-	-	(1)	-	(1)	-	(1)	-
Weekly dollar benefit varies	24	(1)	1	1	9	1	10	-	2	(1)
By earnings	22	(1)	(1)	1	8	(1)	10	-	2	(1)
By service or length of disability	2	(1)	(1)	-	(1)	(1)	(1)	-	(1)	-
Professional and administrative										
All types	100	1	4	6	74	2	9	(1)	4	(1)
Fixed percent of earnings	66	1	2	5	53	1	1	(1)	3	(1)
Less than 50	1	-	(1)	-	(1)	(1)	-	-	-	-
50	22	(1)	-	2	19	-	-	-	(1)	(1)
55	(1)	-	-	-	(1)	-	-	-	-	-
60	20	(1)	1	1	16	(1)	(1)	-	2	-
65	6	(1)	-	2	4	-	-	-	(1)	-
67	11	(1)	1	-	10	(1)	(1)	(1)	-	(1)
70	3	-	(1)	(1)	3	-	-	-	-	-
75	2	-	1	(1)	(1)	1	-	-	(1)	-
80	1	-	-	-	1	-	-	-	-	-
Percent of earnings varies	10	-	-	(1)	2	(1)	7	-	1	-
By service	5	-	-	(1)	(1)	-	4	-	-	-
By length of disability	3	-	-	-	(1)	(1)	3	-	-	-
By both service and length of disability	2	-	-	-	1	-	-	-	1	-

See footnotes at end of table.

Table 20. Sickness and accident insurance: Percent of full-time participants by type and duration of payments, medium and large firms, 1985—Continued

Type of payment	Total	Maximum weeks of coverage								No maximum
		Less than 13	13	14-25	26	27-51	52	Greater than 52	Varies by service	
Professional and administrative										
Fixed weekly dollar benefit	13	(1)	2	1	9	–	1	–	–	–
Less than $60	6	–	(1)	–	5	–	–	–	–	–
$60-$79	1	–	1	(1)	–	–	–	–	–	–
$80-$99	1	(1)	(1)	–	1	–	(1)	–	–	–
$100-$119	2	–	(1)	(1)	1	–	1	–	–	–
$120-$139	2	(1)	(1)	–	1	–	(1)	–	–	–
$140-$159	(1)	–	–	–	(1)	–	(1)	–	–	–
$160-$179	1	–	–	–	1	–	–	–	–	–
$180-$199	(1)	–	–	(1)	–	–	–	–	–	–
$200-$219	1	–	–	–	1	–	–	–	–	–
Weekly dollar benefit varies	11	–	(1)	–	10	(1)	(1)	–	(1)	–
By earnings	10	–	(1)	–	9	(1)	(1)	–	(1)	–
By service or length of disability	1	–	–	–	1	–	–	–	(1)	–
Technical and clerical										
All types	100	4	10	7	64	3	6	(1)	7	(1)
Fixed percent of earnings	67	1	7	6	45	2	1	(1)	5	(1)
Less than 50	1	–	–	–	–	(1)	–	–	(1)	–
50	25	1	2	2	20	–	(1)	–	(1)	(1)
55	1	–	–	–	1	(1)	–	–	–	–
60	17	(1)	1	2	10	1	(1)	–	2	–
65	5	(1)	–	1	2	–	–	–	1	–
66	(1)	–	–	–	(1)	–	–	–	–	–
67	13	(1)	3	–	10	(1)	(1)	–	–	(1)
70	2	–	(1)	(1)	1	–	–	–	(1)	–
75	2	–	1	(1)	(1)	(1)	–	(1)	(1)	–
80	1	–	–	–	1	–	–	–	–	–
Percent of earnings varies	10	–	(1)	1	4	(1)	3	–	1	–
By service	5	–	–	1	2	–	3	–	–	–
By length of disability	2	–	(1)	–	(1)	(1)	1	–	–	–
By both service and length of disability	3	–	–	(1)	2	–	–	–	1	–
Fixed weekly dollar benefit	13	2	2	1	7	–	1	–	1	–
Less than $60	4	–	1	–	3	–	–	–	–	–
$60-$79	1	–	(1)	(1)	(1)	–	(1)	–	(1)	–
$80-$99	1	(1)	(1)	–	(1)	–	(1)	–	–	–
$100-$119	4	2	1	(1)	1	–	(1)	–	–	–
$120-$139	1	(1)	(1)	–	1	–	(1)	–	–	–
$140-$159	(1)	–	–	–	(1)	–	(1)	–	–	–
$160-$179	1	–	–	–	1	–	(1)	–	(1)	–
$180-$199	(1)	–	–	(1)	–	–	(1)	–	–	–
$200-$219	(1)	–	–	–	(1)	–	–	–	–	–
$220 or more	(1)	–	–	–	–	–	(1)	–	–	–
Weekly dollar benefit varies	10	–	(1)	–	7	1	1	–	1	–
By earnings	9	–	(1)	–	6	1	1	–	(1)	–
By service or length of disability	1	–	(1)	–	1	–	(1)	–	(1)	–

See footnotes at end of table.

Table 20. Sickness and accident insurance: Percent of full-time participants by type and duration of payments, medium and large firms, 1985—Continued

Type of payment	Total	Maximum weeks of coverage								No maximum
		Less than 13	13	14-25	26	27-51	52	Greater than 52	Varies by service	
Production										
All types	100	2	13	6	52	2	19	-	7	(¹)
Fixed percent of earnings	33	(¹)	3	3	24	(¹)	1	-	2	(¹)
Less than 50	(¹)	-	-	-	(¹)	(¹)	-	-	-	-
50	12	(¹)	2	2	8	-	(¹)	-	(¹)	(¹)
55	(¹)	-	-	-	(¹)	-	-	-	-	-
60	10	(¹)	(¹)	1	7	-	(¹)	-	1	-
62	(¹)	-	-	-	(¹)	-	-	-	-	-
65	1	(¹)	-	(¹)	1	-	-	-	(¹)	-
67	7	(¹)	1	-	6	(¹)	(¹)	-	-	(¹)
70	1	-	(¹)	(¹)	1	-	-	-	(¹)	-
75	1	-	(¹)	-	(¹)	(¹)	-	-	(¹)	-
80	(¹)	-	-	-	(¹)	-	-	-	-	-
Percent of earnings varies	2	-	-	(¹)	1	-	-	-	(¹)	-
By service	1	-	-	-	1	-	-	-	-	-
By length of disability	(¹)	-	-	-	(¹)	-	-	-	-	-
By both service and length of disability	1	-	-	(¹)	(¹)	-	-	-	(¹)	-
Fixed weekly dollar benefit	34	1	9	1	17	1	3	-	2	-
Less than $60	6	(¹)	3	(¹)	2	(¹)	-	-	-	-
$60-$79	4	-	3	(¹)	1	(¹)	(¹)	-	(¹)	-
$80-$99	2	(¹)	(¹)	-	2	-	(¹)	-	-	-
$100-$119	5	(¹)	1	1	3	-	-	-	-	-
$120-$139	3	(¹)	1	(¹)	2	(¹)	(¹)	-	-	-
$140-$159	4	-	(¹)	-	3	(¹)	1	-	-	-
$160-$179	3	-	-	-	3	-	(¹)	-	(¹)	-
$180-$199	4	-	(¹)	(¹)	1	(¹)	1	-	1	-
$200-$219	1	-	(¹)	-	1	-	-	-	-	-
$220 or more	2	-	-	-	1	-	(¹)	-	1	-
Weekly dollar benefit varies	31	(¹)	1	1	9	(¹)	15	-	4	(¹)
By earnings	29	(¹)	(¹)	1	8	(¹)	15	-	3	(¹)
By service or length of disability	2	(¹)	(¹)	-	(¹)	(¹)	(¹)	-	1	-

[1] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 21. Sickness and accident insurance: Percent of full-time participants with benefits based on percent of earnings formula by maximum weekly benefit, medium and large firms, 1985

Type of payment	Total	Maximum weekly benefit											No maximum
		Total with maximum	Less than $100	$100 to $119	$120 to $139	$140 to $159	$160 to $199	$200 to $249	$250 to $299	$300 to $349	$350 to $399	$400 or more	
All participants													
Total	100	66	3	5	4	28	5	9	[illegible]	4	2	7	32
Fixed percent of earnings	90	67	3	5	4	28	5	9	[illegible]	4	2	7	23
Less than 50	1	-	-	-	-	-	-	-	-	-	-	-	1
50	32	26	2	1	-	17	1	1	[illegible]	1	-	1	6
55	1	1	-	-	-	(1)	(1)	(1)	(1)	(1)	-	-	-
60	28	21	1	2	3	(1)	2	6	1	2	1	3	5
62	(1)	(1)	-	-	-	-	(1)	-	-	-	-	-	-
65	5	(1)	-	-	-	(1)	-	-	-	(1)	-	-	4
66	(1)	(1)	-	-	-	-	-	-	(1)	-	-	-	-
67	18	16	(1)	1	(1)	10	1	(1)	(1)	1	1	2	2
70	4	2	-	(1)	(1)	1	-	1	-	(1)	(1)	(1)	1
75	3	1	-	-	-	-	(1)	(1)	-	-	-	1	2
80	1	(1)	-	-	(1)	-	-	-	-	-	-	-	1
Percent of earnings varies	10	1	-	-	-	-	-	(1)	-	(1)	(1)	(1)	9
Professional and administrative													
Total	100	64	4	1	3	28	3	9	1	7	1	7	36
Fixed percent of earnings	87	63	4	1	3	28	3	8	1	7	1	6	24
Less than 50	1	-	-	-	-	-	-	-	-	-	-	-	1
50	28	24	2	1	-	19	-	1	1	(1)	-	-	4
55	1	1	-	-	-	-	1	-	-	-	-	-	-
60	26	22	1	-	3	-	1	8	(1)	5	1	3	4
65	8	1	-	-	-	-	-	-	-	1	-	-	7
67	15	13	(1)	-	(1)	9	1	-	-	(1)	-	3	2
70	4	2	-	(1)	-	(1)	-	(1)	-	-	(1)	1	2
75	3	(1)	-	-	-	-	-	-	-	-	-	(1)	3
80	1	-	-	-	-	-	-	-	-	-	-	-	1
Percent of earnings varies	13	1	-	-	-	-	-	(1)	-	(1)	(1)	(1)	13
Technical and clerical													
Total	100	65	3	[illegible]	4	31	4	8	3	2	1	9	35
Fixed percent of earnings	87	63	3	3	4	31	4	8	3	2	1	9	24
Less than 50	1	-	-	-	-	-	-	-	-	-	-	-	1
50	33	26	2	1	-	21	(1)	(1)	[illegible]	(1)	-	-	6
55	1	1	-	-	-	-	(1)	(1)	-	(1)	-	-	-
60	22	17	1	1	3	(1)	2	4	1	1	(1)	4	5
65	6	(1)	-	-	-	(1)	-	-	-	(1)	-	-	6
66	(1)	(1)	-	-	-	-	-	-	(1)	-	-	-	-
67	17	15	(1)	1	(1)	9	1	(1)	(1)	(1)	(1)	4	1
70	3	2	-	(1)	(1)	(1)	-	(1)	-	(1)	(1)	(1)	1
75	3	1	-	-	-	-	(1)	(1)	-	-	-	1	2
80	2	(1)	-	-	(1)	-	-	-	-	-	-	-	2
Percent of earnings varies	13	2	-	-	-	-	-	(1)	-	(1)	1	1	12
Production													
Total	100	72	3	[illegible]	4	26	7	11	3	3	3	5	28
Fixed percent of earnings	94	71	3	[illegible]	4	26	7	11	3	3	2	5	23
Less than 50	1	-	-	-	-	-	-	-	-	-	-	-	1
50	33	26	1	2	-	14	2	[illegible]	[illegible]	1	-	2	7
55	1	1	-	-	-	(1)	(1)	-	(1)	(1)	-	-	-
60	28	22	1	5	4	1	2	7	(1)	1	1	2	6
62	(1)	(1)	-	-	-	-	(1)	-	-	-	-	-	-
65	2	(1)	-	-	-	(1)	-	-	-	(1)	-	-	2
67	21	18	(1)	1	(1)	10	2	(1)	-	1	1	1	3
70	4	3	-	-	(1)	1	-	1	-	(1)	(1)	(1)	1
75	3	1	-	-	-	-	-	(1)	-	-	-	1	2
80	1	-	-	-	-	-	-	-	-	-	-	-	1
Percent of earnings varies	6	1	-	-	-	-	-	(1)	-	-	(1)	-	5

[1] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 22. Sickness and accident insurance: Percent of full-time participants by length-of-service requirements for participation,[1] medium and large firms, 1985

Length-of-service requirement	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
With service requirement	79	67	75	82
1 month	24	29	26	22
2 months	9	4	6	11
3 months	26	21	26	26
4-5 months	10	5	5	12
6 months	5	5	6	5
1 year	4	3	4	5
Over 1 year	1	1	2	(2)
Without service requirement	21	33	24	18
Service requirement not determinable	(2)	-	(2)	(2)

[1] Length of time employees must be on the job before they are covered by a plan that is at least partially employer financed. There is frequently an administrative time lag between completion of the requirement and the actual start of participation. If the lag was 1 month or more, it was included in the service requirement. Minimum age requirements are rare.

[2] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 23. Long-term disability insurance: Percent of full-time participants by method of determining payment, medium and large firms, 1985

Method	All participants			Professional and administrative participants			Technical and clerical participants			Production participants		
	Total	With maximum coverage provisions[1]	Without maximum coverage provisions	Total	With maximum coverage provisions[1]	Without maximum coverage provisions	Total	With maximum coverage provisions[1]	Without maximum coverage provisions	Total	With maximum coverage provisions[1]	Without maximum coverage provisions
All methods	100	68	32	100	69	31	100	75	25	100	61	39
Fixed percent of earnings	74	58	16	81	60	21	80	65	16	59	48	11
Less than 50 percent	1	1	(2)	1	1	(2)	1	1	-	1	1	-
50 percent	22	18	4	20	13	7	20	18	2	26	23	3
55 percent	1	1	(2)	1	1	(2)	1	1	(2)	1	1	(2)
60 percent	38	29	10	47	35	12	44	34	10	24	17	7
65 or 67 percent	10	8	2	11	9	2	12	10	2	7	6	1
70 percent or more	2	1	1	2	2	1	3	2	1	1	1	(2)
Percent varies by earnings	10	6	4	11	6	5	13	9	5	7	5	2
Percent varies by service	1	1	(2)	1	(2)	(2)	1	(2)	1	1	1	-
Scheduled dollar amount varies by earnings	10	2	8	1	1	(2)	2	1	1	27	3	24
Other[3]	5	2	3	6	1	5	3	(2)	3	5	3	2

[1] Includes dollar maximums in plans that pay a percent of earnings, ceilings on income during disability that limit the amount payable from the LTD plans plus other income, or a combination of both.

[2] Less than 0.5 percent.

[3] Includes flat dollar amounts and scheduled percent of earnings varying by length of disability.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 24. Long-term disability insurance: Percent of full-time participants by duration of benefits, medium and large firms, 1985

Duration of benefits	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	99	100
Until a specified age[1]	21	21	22	20
Under age 65	([2])	([2])	([2])	-
Age 65	18	18	19	18
Age 70	3	3	3	3
Duration of benefit varies	73	72	73	74
By length of service	1	1	1	1
By age at time of disability[3]	72	71	72	73
Single reduction	34	31	31	41
Gradual reduction	38	40	40	33
Other[4]	6	6	5	5

[1] The age may be directly specified or the designated retirement age.

[2] Less than 0.5 percent.

[3] Under the Age Discrimination in Employment Act, age-based reductions in employee benefit plans are permissible when justified by significant cost considerations. The duration of benefits may be reduced gradually according to an age schedule or reduced once at a specified age.

[4] Includes benefits lasting for life, for a specified number of months, or until some unspecified retirement age.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 25. Long-term disability insurance: Percent of full-time participants by length-of-service requirements for participation,[1] medium and large firms, 1985

Length-of-service requirement	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
With service requirement	69	68	72	66
1 month	11	12	9	10
2 months	4	3	2	7
3 months	16	13	16	18
4-5 months	2	1	1	4
6 months	12	11	12	13
1 year	15	18	19	8
2 years	1	2	2	([2])
3 years	2	1	3	1
Over 3 years	6	7	7	4
Without service requirement	31	32	28	34

[1] Length of time employees must be on the job before they are covered by a plan that is at least partially employer financed. There is frequently an administrative time lag between completion of the requirement and the actual start of participation. If the lag was 1 month or more, it was included in the service requirement.

[2] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Chapter 4. Health and Life Insurance

Along with paid holidays and paid vacations, health and life insurance are the most widespread employee benefits in medium and large firms. Both benefits were provided to 96 percent of all employees, and the extent of coverage was nearly identical within each of the three occupational groups.

Health insurance

Virtually all of the participants in health insurance plans were covered for the major categories of medical care, such as hospital room and board, care by physicians and surgeons, diagnostic X-ray and laboratory work, prescription drugs, and private duty nursing (table 26). Among benefits less commonly provided were vision care (covering 35 percent of the participants), hearing care (17 percent), and routine physical exams (13 percent). Unlike most other employee benefits, there were few differences in health insurance provisions among employee groups.

The various categories of medical care are covered under 1 of 3 benefit arrangements: Basic benefits only, major medical benefits only, or basic benefits plus major medical. Basic benefit plans cover a specific medical service (such as hospitalization) and generally do not require deductible or coinsurance payments by insured individuals.[5] Conversely, major medical plans cover many categories of care and usually have both deductible and coinsurance features. In-hospital care was most commonly covered by an arrangement that offered basic coverage plus supplemental major medical coverage. Certain categories of medical care, such as private duty nursing, visits to a physician's office, and prescription drugs, usually were covered only as major medical benefits. Dental and vision care were almost exclusively covered as basic benefits. Regardless of the benefit arrangement used, most health plans limited the size of benefit payments.

A majority of the participants were in health plans extending coverage into retirement:[6]

	Occupational group			
Provision	*All*	*Professional and administrative*	*Technical and clerical*	*Production*
Total	100	100	100	100
With retiree coverage	73	77	77	69
Without retiree coverage	24	20	20	28
Provision not determinable	3	3	3	3

These plans nearly always covered retirees up to age 65, and generally provided the same benefits given to active employees (table 27). In over nine-tenths of the cases, retirees remained insured after 65. Again there was commonly no change in benefit levels, apart from coordination with Medicare.

Regardless of the retiree's age, premiums for retiree insurance were fully company-paid in plans covering nearly three-fifths of covered participants; but for one-tenth, protection continued only if the retiree paid the full cost. For one-third of the participants in plans covering retirees under age 65 and one-quarter in plans covering retirees age 65 and older, the company shared the costs with the retirees.

Hospital coverage (table 28). The most costly component of health care is that provided by a hospital. Nearly one-half of all personal health care expenditures in the United States are for hospital care.[7] Virtually all of the participants in health plans analyzed in this study received coverage for hospital expenses.

For most employees, insurance covers all initial hospital room expenses; however, a growing minority must pay part of the first-dollar costs. The percent of health plan participants with only major medical coverage increased to 33 percent in 1985, from 28 percent in 1984 and 19 percent in 1983. These employees typically must pay both an initial deductible and a percentage of subsequent hospital room charges. Of the 66 percent of health insurance participants with basic hospital coverage, 13 percent must pay a specified amount per admission or, in some cases, pay for the first day of confinement.

[5] The deductible is a specified amount of medical expense that an insured person must pay before benefits will be paid by the plan. Coinsurance is a provision where both the (insured) participant and the insurer share, in a specified ratio, the health care expenses resulting from an illness or injury. The coinsurance percentage is the share paid by the plan (insurer).

[6] The survey included fully retiree-paid coverage for the first time in 1983.

[7] Ross H. Arnett III, David R. McKusick, Sally T. Sonnefeld, and Carol S. Cowell, "Projections of Health Care Spending to 1990," *Health Care Financing Review*, Spring 1986, pp. 1-36.

Of those that received basic hospital coverage, 95 percent were in plans that paid room and board expenses up to the semiprivate rate, providing some protection against rising hospital charges. Eighty-five percent of the participants in basic hospital plans had ceilings on the duration of coverage. Two-thirds had plans which specified the maximum number of days covered per confinement, most commonly 120 or 365 days. Most of the remaining plans limited the duration of coverage by specifying a maximum dollar amount per admission or per year.[8] Additional coverage was usually available under a major medical plan for cases that exceeded these limitations.

Surgical coverage (table 29). Seventy percent of health plan participants had basic coverage for surgery in 1985. Three-fourths of these participants had plans with payments based on the "usual, customary, and reasonable" charge for the procedure performed, up from 69 percent in 1984. Although most of these plans paid 100 percent of such charges, 16 percent of the participants were in plans that paid between 80 and 95 percent or imposed an overall dollar limit on surgical payments. The remaining quarter of participants with basic surgical benefits were covered by a schedule of payments, listing the maximum amount payable for each operation. Charges in excess of the scheduled amount were usually covered by a major medical plan.

Major medical coverage (tables 30–32). Major medical benefits, provided to nearly nine-tenths of the health insurance participants, generally covered a wide range of medical services both in and out of the hospital. There are two types of major medical plans: One supplements basic benefits either by covering expenses which exceed basic benefit limitations or by covering expenses not paid by the basic plan; the other is comprehensive and stands alone without basic plan coverage. Comprehensive major medical policies have been embraced by employers seeking to contain costs of providing health care, because they may eliminate first-dollar coverage.[9]

With very few exceptions, major medical benefits are not paid until the participants have paid a deductible. The purpose of this deductible is to keep the premium cost down and discourage unnecessary use of medical services. A deductible amount of $100 has been the most common since the survey's inception in 1979, applying to nearly half of all plan participants. However, 29 percent were required to pay deductibles of $150 or more in 1985, up from 21 percent in 1984 and 12 percent in 1983 (chart 1). Higher amounts were less prevalent for blue-collar workers than for white-collar workers.

Once the worker meets the deductible requirement, the plan pays a specified percentage (coinsurance) of incurred expenses. Almost seven-eighths of the participants were in plans that paid 80 percent of expenses, with the remaining 20 percent to be paid by the worker. For over three-fourths of the participants, however, the percentage paid by the plan increased to 100 percent after a specified level of expenses was incurred during a year. For example, a plan might pay 80 percent of the first $5,000 of covered expenses and 100 percent thereafter, thus limiting the employee's "out-of-pocket" cost to $1,000 (in addition to the deductible). Incidence of this protection has increased each year since 1979, when less than one-half of the major medical participants were covered.[10]

Benefits for 82 percent of major medical participants were subject to a ceiling on the amount payable by the plan, usually a lifetime maximum. In 1985, the most common limitation was $1 million; $250,000 had been the most prevalent limit in previous years. The average lifetime maximum was $530,000—an increase of nearly $200,000 since 1982.

Dental coverage (tables 33–36). Over three-fourths of the participants in health insurance plans received coverage for dental expenses, about the same as in 1984. This ended a period of strong growth in dental care; in 1979, one-half received coverage. Nearly all dental plans covered a wide range of services including examinations, X-rays, and restorative procedures such as fillings, periodontal care, and inlays. Plans covering orthodontic expenses, at least for dependent children, covered 73 percent of employees with dental benefits in 1985.

Dental payments were most commonly based on a percentage of the usual, customary, and reasonable charge for a procedure. The percentage covered by a plan generally depended on the type of procedure performed. Less costly procedures such as examinations and X-rays were usually covered at 80 or 100 percent. Fillings, surgery, and periodontal care were most likely to be covered at 80 percent. More expensive procedures—inlays, crowns, and orthodontia—were often

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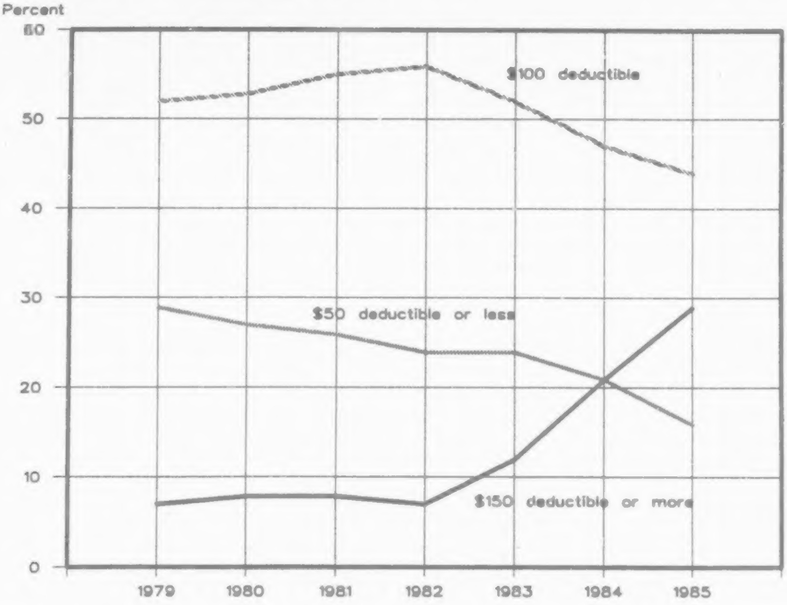
[8] This limitation is commonly found in comprehensive major medical plans. These plans usually cover hospital expenses in full up to a specified dollar amount per confinement (typically between $2,000 and $5,000) and 80 percent thereafter. For this study, the full-coverage portion was treated as a basic benefit and the 80-percent portion as major medical.

[9] Comprehensive major medical plans can be broken down into strict and modified varieties. All expenses covered are subject to the deductible and coinsurance provisions under the strict version, whereas the modified version might cover hospital, or hospital and surgical, expenses in full up to a specified dollar amount without the application of a deductible. (Also, see footnote 8.)

[10] Trends in major medical benefits are examined by Douglas Hedger and Donald Schmitt in "Trends in Major Medical Coverage During a Period of Rising Costs," *Monthly Labor Review*, July 1983, pp. 11-16.

Chart 1. Trends in selected deductible amount: Percent of full-time participants in major medical plans, medium and large firms, 1979-85



provided at 50 percent of the usual, customary, and reasonable charge.

About one-fifth of the dental plan participants were offered reimbursement based on a schedule of cash allowances. In this type of arrangement, each procedure is subject to a specified maximum dollar amount that can be paid to the participant. Preventive procedures were less likely to be subject to this type of schedule than restorative procedures.

Two percent of dental plan participants had services covered by an incentive schedule. Under this arrangement, the percentage of dental expenses paid by the plan increases each year if the participant is examined regularly by a dentist.

Unlike other basic health benefits, dental plans typically required participants to pay a specified deductible amount before the plan paid any benefits. The most common requirement was a $25 or $50 deductible to be met by the participant each year. However, some plans required the participant to pay a deductible (usually $50) only once while a member of the plan rather than every year. White-collar workers were more likely than blue-collar workers to have plans with deductible requirements.

Ninety percent of dental plan participants were enrolled in plans that limited the amount of payment each year by specifying a yearly maximum benefit. Although many plans have raised their limits since 1980, there was little change between 1984 and 1985. In both years, the most common limit was $1,000. Orthodontic services were almost always subject to lifetime maximums, which have increased since first tabulated in 1980. Lifetime maximums of $1,000 or more for orthodontia applied to 44 percent of participants in dental plans providing this benefit in 1985, up from 17 percent in 1980.

Mental health coverage (table 37). In 1985, of the participants in plans with mental health benefits, 57 percent had more restrictive hospital coverage for mental illnesses than for physical ailments, up from 52 percent in 1984 and 46 percent in 1983. These plans usually reduced the duration of the hospital stay (often 30 days for mental health care in basic hospital benefits, compared to 120 or 365 days for other illnesses) or imposed a separate maximum on covered hospital expenses (such as a lifetime maximum of $25,000 on mental health benefits). Even more restrictive was coverage for mental health care outside the hospital (psychiatric office visits). Outpatient mental health care was usually covered in the major medical portion of a plan, where: (1) ceilings were often placed on the amounts payable for each visit and/or each year, and (2) the coinsurance rate for nonhospital treatment was often 50 percent, compared to 80 percent for physical illnesses. Also, limits on annual out-of-pocket major medical expenses usually did not apply to outpatient mental health care.

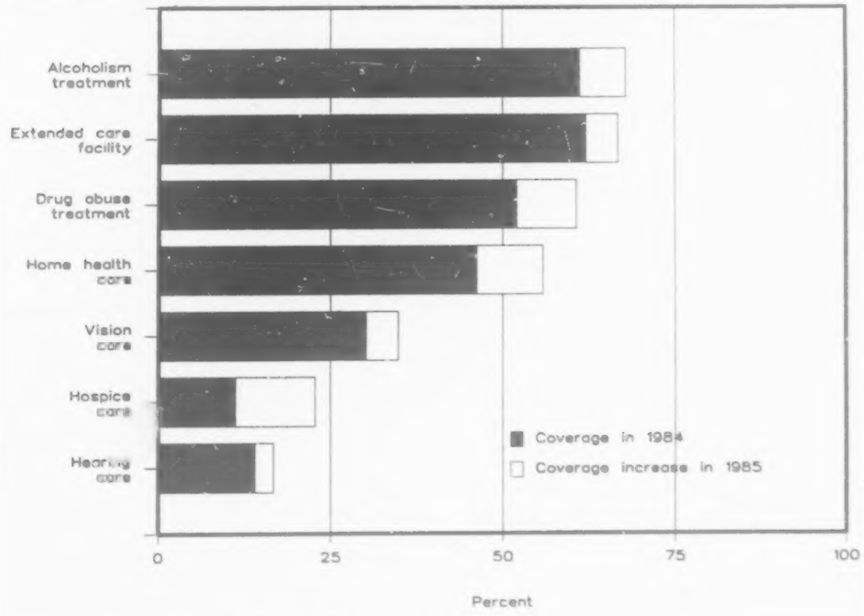
Other health benefits (tables 38–39). The incidence of alcohol and drug abuse provisions increased sharply for the second consecutive year. The percent of participants covered for alcoholism treatment grew from 61 to 68 percent between 1984 and 1985, and for drug abuse treatment, from 52 to 61 percent (chart 2).

Thirty-five percent of health insurance participants were covered for vision care expenses in 1985, up from 30 percent in 1984 and 18 percent in 1979. Although gains were made in all 3 occupational groups, plans for blue-collar workers were typically more comprehensive than those for white-collar workers.

Hearing care was available to 17 percent of participants in 1985, up from 14 percent in 1984, and 10 percent in 1983.

Cost containment (table 40). In line with efforts to contain costs of health care, an increasing number of plans provided less expensive alternatives to a hospital stay. Coverage for treatment in extended care facilities increased from 62 percent of plan participants in 1984 to 67 percent in 1985; coverage for home health care rose from 46 percent to 56 percent; and availability of coverage for hospice care rose from 11 percent to 23 percent. Lengths of hospital admissions were decreased by provisions for prehospitalization testing, which covered nearly half of the participants. Other cost containment

Chart 2. Coverage for selected types of medical care: Precent of full-time participants in health insurance plans, medium and large firms, 1984 and 1985



measures, first studied in 1985, encouraged outpatient surgery as an alternative to inpatient surgery. Coverage for treatment at ambulatory surgical centers was provided to 39 percent of the participants. One-fourth of the participants received higher reimbursements or paid lower deductible amounts for certain surgical procedures performed on an outpatient basis.

Second surgical opinions were paid for under plans covering half the health insurance participants in 1985, double the percentage when first analyzed only 3 years earlier. For 1 in 2 of these cases, incentives were included for obtaining an additional surgeon's opinion—plan payments for many types of surgery were either lower or not made at all if the second opinion was not obtained.

Other cost containment provisions, such as offering higher reimbursement for generic prescription drugs and discouraging nonemergency weekend hospital admissions, were less common.

Employee contributions (table 41). The percent of employees whose health insurance premiums are wholly paid by their employers remained nearly stable in 1985. Sixty-one percent of workers had employee coverage wholly financed by their employers in 1985, about the same as in 1984. Forty-two percent also could receive fully employer-paid coverage for their dependents, the first time this proportion has not fallen since first tabulated in 1980.

Exact data on the amount of an employee's contributions for health benefits sometimes were not available because payroll deductions applied to an insurance policy covering both health insurance and one or more other benefits. However, where the amount was reported, employee premiums for single and family coverage averaged approximately $12 and $38 a month, respectively—nearly unchanged from 1984 (chart 3). Employee premiums were somewhat lower for production participants than for the other two groups. In some instances, included in the calculation of average employee premiums, employees contributed only for a supplemental plan, such as an optional dental plan financed jointly by employer and employees.

Participation requirements (table 42). Fifty-four percent of participants were required to complete minimum length-of-service periods before joining a health plan. These service requirements usually were periods of 1, 2, or 3 months. The incidence of service requirements varied markedly among the employee groups. While nearly three-fifths of professional-administrative employees could participate immediately, two-thirds of production workers had some waiting period.

Funding medium (table 43). Employers typically arrange for health care coverage through the purchase of commercial insurance policies or Blue Cross-Blue Shield plans. These arrangements covered, for example, 60 percent of the health insurance participants with basic hospitalization benefits in 1985, and 53 percent of those with major medical benefits.

Self-insured health plans, however, have been growing in importance. In 1985, at least one-fourth of the workers receiving the benefits shown in table 43 (basic hospital, basic surgical, basic medical, major medical, and dental benefits) were under self-insured plans of individual employers or labor-management groups. This proportion has doubled since 1980. Such self-insurance was most prominent as a source of major medical and dental benefits. Employers commonly contract with commercial insurers to protect their self-insured plans against medical claims exceeding a predetermined maximum dollar amount.

About 7 percent of the health insurance participants covered by the survey were enrolled in Health Maintenance Organizations (HMOs). An HMO is a prepaid health care plan that delivers comprehensive medical services to enrolled members for a fixed periodic fee.[11]

Life insurance (tables 44–48)

Nearly all full-time employees within the scope of the survey participated in life insurance plans in 1985; almost nine-tenths had the cost of a basic plan paid wholly by the employer. Life insurance coverage has kept pace with earnings since 1979, either through an increase in specified dollar amounts of insurance or through increased maximums in formulas linked to earnings.

Basic coverage for two-thirds of all life insurance participants was based on their earnings, enabling the level of protection to automatically increase with a rise in pay. Earnings-based formulas were much more prevalent among white-collar workers (82 percent) than among blue-collar workers (48 percent). The most common method of tying life insurance protection to earnings was to multiply the employee's annual earnings by a factor of 1 or 2 and round the product to the next $1,000. For example, an employee earning $22,700 would receive $46,000 of coverage under a plan providing two times earnings ($22,700 times 2 equals $45,400, which is rounded up to $46,000).

Nearly one-half of all employees in multiple-of-earnings plans had insurance equal to annual earnings. One-third had coverage equal to twice annual earnings. Professional-administrative participants had the highest coverage, with plans commonly providing multiples of two or more times their earnings. Multiple-of-earnings formulas tended to be higher when employee contribu-

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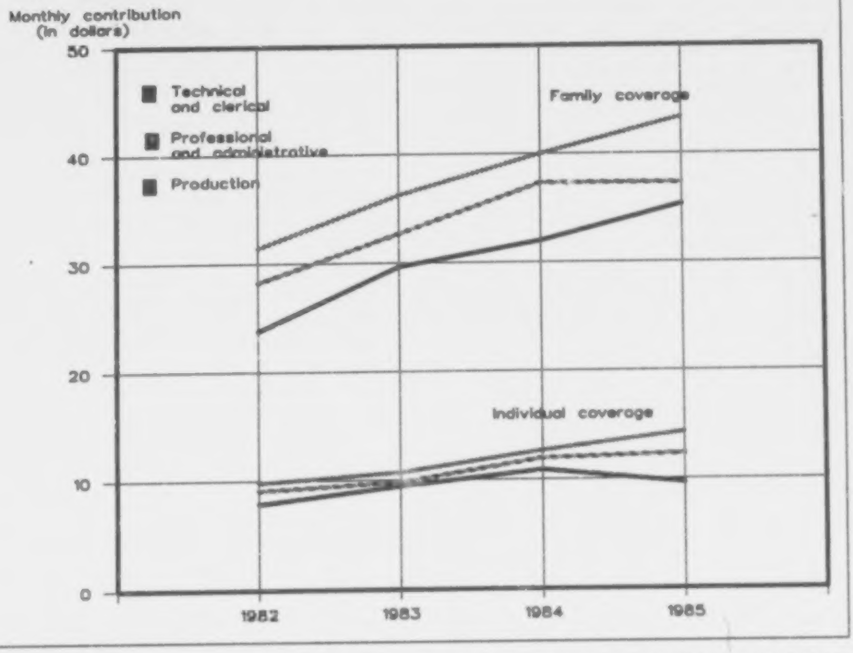
[11] HMO plans and plans provided through the more traditional health insurers are compared by Allan Blostin and William Marclay in "HMOs and Other Health Plans: Coverage and Employee Premiums," *Monthly Labor Review*, June 1983, pp. 28–33.

Chart 3. Average employee contributions for health insurance, medium and large firms, 1982-85



tions were required, typically providing insurance at two or more times earnings.[12]

There was no upper limit on life insurance for more than one-half of participants in multiple-of-earnings plans. Where limits existed, the proportion of employees with maximums under $100,000 has declined from one-half to one-fifth since 1979; the percent with maximums over $250,000 has increased correspondingly.

Thirty-one percent of life insurance plan participants had a flat dollar amount of insurance, regardless of earnings. One-half of all production worker participants were covered by a uniform amount, compared with 14 percent of white-collar workers. Uniform amounts for production workers averaged $10,000, slightly higher than the average for the other two groups. While usually providing much smaller amounts of insurance than earnings-based formulas, flat amount coverage has improved. Participants in plans providing benefits of less than $5,000 decreased from 29 percent in 1981 to 13 percent in 1985; most of the offsetting increase was in amounts of $15,000 or more, which, during the same period, grew in incidence from 7 to 18 percent of workers insured by flat amounts.

If a participant became totally disabled, life insurance in nearly all plans was continued, either for life or until age 65. To qualify under disability provisions, the employee was usually required to be under a specified age (commonly age 60) at the time of disability. For a few plans, the amount of coverage was payable to the disabled employee in lump-sum or installment form.

Almost three-fourths of all life insurance participants had additional insurance coverage if accidental death or dismemberment occurred. The amount of insurance was usually doubled in the case of accidental death.

[12] The employee contribution rate was commonly expressed as a fixed monthly rate for each $1,000 of insurance. Reported rates varied widely from 7 cents to 99 cents per $1,000, and in some plans applied only to amounts of basic scheduled insurance in excess of a free portion (for example, the first $5,000 of coverage). Data were not available for one-third of contributory plan participants, however, because payroll deductions sometimes applied to an insurance policy covering life insurance and one or more other benefit areas.

In addition to basic coverage, some employers offered their workers supplemental life insurance that was at least partially employer financed. The typical supplemental plan provided insurance in multiples of 1 to 3 times annual earnings. Only 6 percent of the employees, ranging from 9 percent of professional-administrative workers to less than 3 percent of production workers, were participants in these plans.

Thirteen percent of participants were in plans which provided monthly income to surviving family members, nearly always in addition to life insurance benefits. Surveyed for the first time in 1985, survivor income benefits were usually paid to the spouse, but sometimes either to the spouse, children, or parents of the deceased employee. Benefits generally consisted of either a flat dollar amount or percent of employee earnings, payable for a limited period, such as 24 months. In some plans, payments were designed to bridge the gap between the employee's death and the spouse's remarrying or qualifying for other benefits, such as Social Security.

Life insurance on workers' spouses and unmarried dependent children also is sometimes available. One-fifth of life insurance participants had employer-financed dependent coverage in 1985; in most cases, the employer paid all of the cost. Nearly all plans covered dependent children as well as spouses. The most common coverage for death of either a spouse or a child was a flat amount of $1,000. Higher amounts, however, were available more often for spouses than for children: Spouse coverage of $2,000 or more applied to one-half of the participants with dependent life insurance, but similar coverage for a child applied to only one-fifth of these workers. Instead of a flat amount, coverage for a child sometimes increased at specified ages: For example, no coverage until 14 days old, then $250 until 6 months, followed by $500 up to a year, and $1,000 thereafter.

Minimum length-of-service requirements for participation were found in plans covering 53 percent of workers with life insurance. The incidence of these provisions has decreased gradually each year from 61 percent in 1981. As is the case for health and sickness and accident insurance, service requirements are generally 3 months or less.

For 62 percent of all participants, basic life insurance continued after retirement. The preretirement amount of insurance, however, was reduced in nearly all instances.[13] Other forms of life insurance—accidental death and dismemberment, supplemental, and dependent coverage—were seldom available after retirement.

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[13] For one-half of the participants, coverage is reduced if they continue working beyond retirement age. However, the reduction in the amount of coverage is usually not as severe as for retirees. For details, see Michael A. Miller, "Age-related Reductions in Workers' Life Insurance," *Monthly Labor Review*, September 1985, pp. 29-34.

Table 26. Health insurance: Percent of full-time participants by coverage for selected categories of medical care, medium and large firms, 1985

Category of medical care	Total	Care provided				Care not provided
		All	By basic benefits only[1]	By major medical only[2]	By basic benefits and major medical	
All participants						
Hospital room and board	100	99	19	33	47	1
Hospitalization—miscellaneous services	100	99	18	34	47	1
Outpatient care[3]	100	99	16	29	54	1
Extended care facility[4]	100	67	26	29	12	33
Home health care[5]	100	56	27	20	9	44
Surgical	100	99	33	29	37	1
Physician visits—in hospital	100	99	15	52	32	1
Physician visits—office	100	95	9	80	6	5
Diagnostic X-ray and laboratory[6]	100	99	25	45	29	1
Prescription drugs—nonhospital	100	98	20	75	3	2
Private-duty nursing	100	94	8	85	1	6
Mental health care	100	99	14	32	53	1
Dental	100	76	72	4	-	24
Vision	100	35	29	6	(*)	65
Professional and administrative						
Hospital room and board	100	99	20	38	42	1
Hospitalization—miscellaneous services	100	99	19	39	41	1
Outpatient care[3]	100	99	13	33	54	1
Extended care facility[4]	100	69	25	31	12	31
Home health care[5]	100	59	27	21	10	41
Surgical	100	99	33	36	32	1
Physician visits—in hospital	100	99	14	60	25	1
Physician visits—office	100	99	11	86	3	1
Diagnostic X-ray and laboratory[6]	100	99	24	52	23	1
Prescription drugs—nonhospital	100	98	18	76	3	2
Private-duty nursing	100	99	10	87	1	1
Mental health care	100	99	12	37	50	1
Dental	100	79	74	5	-	21
Vision	100	32	25	7	(*)	68
Technical and clerical						
Hospital room and board	100	99	19	37	43	1
Hospitalization—miscellaneous services	100	99	18	38	43	1
Outpatient care[3]	100	99	14	34	51	1
Extended care facility[4]	100	67	22	33	12	33
Home health care[5]	100	57	25	22	10	43
Surgical	100	99	33	35	31	1
Physician visits—in hospital	100	99	15	57	28	1
Physician visits—office	100	99	11	84	4	1
Diagnostic X-ray and laboratory[6]	100	99	25	50	25	1
Prescription drugs—nonhospital	100	97	17	77	3	3
Private-duty nursing	100	98	10	87	1	2
Mental health care	100	99	12	37	50	1
Dental	100	76	71	5	-	24
Vision	100	33	25	8	(*)	67

See footnotes at end of table.

Table 26. Health insurance: Percent of full-time participants by coverage for selected categories of medical care, medium and large firms, 1985—Continued

Category of medical care	Total	Care provided				Care not provided
		All	By basic benefits only[1]	By major medical only[2]	By basic benefits and major medical	
Production						
Hospital room and board	100	99	20	28	52	1
Hospitalization—miscellaneous services	100	99	20	28	51	1
Outpatient care[3]	100	99	18	25	56	1
Extended care facility[4]	100	65	28	26	11	35
Home health care[5]	100	54	28	19	8	46
Surgical	100	99	33	24	42	1
Physician visits—in hospital	100	99	16	46	37	1
Physician visits—office	100	91	7	75	9	9
Diagnostic X-ray and laboratory[5]	100	99	26	38	34	1
Prescription drugs—nonhospital	100	98	22	73	3	2
Private-duty nursing	100	90	6	83	1	10
Mental health care	100	99	16	27	56	1
Dental	100	73	71	3	–	27
Vision	100	37	32	5	(6)	63

[1] A provision was classified as a basic benefit when it related to the initial expenses incurred for a specific medical service. Under these provisions, a plan paid covered expenses in one of several ways: (1) In full with no limitation; (2) in full for a specified period of time, or until a dollar limit was reached; or (3) a cash scheduled allowance benefit that provided up to a dollar amount for a service performed by a hospital or physician. For a specific category of care, a plan may require the participant to pay a specific amount each disability or year (deductible) or a nominal charge each visit or procedure (copayment) before reimbursement begins or services are rendered.

[2] Major medical benefits cover many categories of expenses, some of which are not covered under basic benefits, and others for which basic coverage limits have been exhausted. These benefits are characterized by deductible and coinsurance provisions that are applied across categories of care.

[3] Coverage for any of the following services charged by the outpatient department of the hospital: Treatment for accidental injury or emergency sickness; surgical procedures; rehabilitative or physical therapy; and treatment for chronic illness (radiation therapy, etc.).

[4] Some plans provide this care only to a patient who was previously hospitalized and is recovering without need of the extensive care provided by a general hospital.

[5] Charges incurred in the outpatient department of a hospital and outside of the hospital.

[6] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 27. Health insurance: Percent of full-time participants in plans with coverage after retirement by benefit provisions and age of retiree, medium and large firms, 1985

Benefit provision	All participants		Professional and administrative participants		Technical and clerical participants		Production participants	
	Retiree under 65	Retiree 65 and over	Retiree under 65	Retiree 65 and over	Retiree under 65	Retiree 65 and over	Retiree under 65	Retiree 65 and over
Total	100	100	100	100	100	100	100	100
With retiree coverage[1]	99	91	100	95	99	94	100	88
Effect of retirement on benefit level								
No change in coverage[2]	81	73	83	77	82	78	79	67
Reduced coverage	15	16	13	15	11	13	18	18
Increased coverage	1	1	(3)	(3)	2	1	(3)	1
Not determinable	3	3	3	3	3	2	3	2
Retiree share of cost								
Full cost	10	10	9	10	9	10	11	10
Partial cost	31	23	34	25	35	26	28	21
No cost	56	54	51	55	51	55	58	53
Not determinable	4	4	5	5	5	5	3	3
Without retiree coverage[4]	1	9	(3)	5	1	6	(3)	12

[1] Includes plans in which insurance was continued for one month or longer after retirement. This table is limited to participants in plans with group insurance for retirees. It excludes plans which provide only retiree's share of premium for medical insurance under Medicare (Part B).

[2] For retirees eligible for Medicare, benefits may be calculated and reduced by the extent to which covered expenses are reimbursed by the Federal program.

[3] Less than 0.5 percent.

[4] Retiree coverage was provided to one age group but not the other.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 28. Health insurance: Percent of full-time participants in plans with basic hospital room and board coverage by type of benefit payments and limits to coverage, medium and large firms, 1985

Type of payment	Total	Subject to limit on days of coverage per hospital confinement[1]						Subject to other limits[2]	Unlimited
		All	Under 120 days	120 days	121 - 364 days	365 days	366 days or more		
All participants									
Total	100	66	9	18	4	31	4	19	15
Daily dollar allowance	5	4	2	(3)	(3)	1	(3)	1	-
Less than $50	(3)	(3)	(3)	-	-	-	-	(3)	-
$50-$99	2	2	1	-	-	(3)	-	(3)	-
$100-$149	1	1	1	(3)	(3)	(3)	(3)	(3)	-
$150-$199	1	1	(3)	-	-	1	-	(3)	-
$200 or more	(3)	(3)	(3)	(3)	(3)	-	-	(3)	-
Semiprivate rate	95	62	6	17	4	30	4	18	15
Professional and administrative									
Total	100	56	6	17	4	26	3	23	21
Daily dollar allowance	3	3	1	(3)	(3)	2	-	(3)	-
Less than $50	(3)	(3)	(3)	-	-	-	-	-	-
$50-$99	(3)	(3)	(3)	-	-	-	-	-	-
$100-$149	1	1	(3)	(3)	-	(3)	-	-	-
$150-$199	1	1	-	-	-	1	-	(3)	-
$200 or more	(3)	(3)	-	(3)	(3)	-	-	-	-
Semiprivate rate	97	53	5	17	3	25	3	23	21
Technical and clerical									
Total	100	60	7	20	6	24	2	20	20
Daily dollar allowance	2	2	1	(3)	(3)	1	(3)	(3)	-
Less than $50	(3)	(3)	(3)	-	-	-	-	-	-
$50-$99	(3)	(3)	(3)	-	-	-	-	(3)	-
$100-$149	1	1	(3)	(3)	-	(3)	(3)	-	-
$150-$199	1	1	-	-	-	1	-	(3)	-
$200 or more	(3)	(3)	-	(3)	(3)	-	-	-	-
Semiprivate rate	98	57	6	20	6	23	2	20	20
Production									
Total	100	74	11	17	4	37	5	16	11
Daily dollar allowance	8	6	4	1	(3)	1	(3)	2	-
Less than $50	1	(3)	(3)	-	-	-	-	(3)	-
$50-$99	3	3	2	-	-	1	-	1	-
$100-$149	2	2	1	(3)	(3)	(3)	(3)	(3)	-
$150-$199	1	1	(3)	-	-	1	-	(3)	-
$200 or more	1	(3)	(3)	(3)	(3)	-	-	(3)	-
Semiprivate rate	92	68	7	16	4	36	5	14	11

[1] In some plans, the limit on days of coverage varied by length of participation in the plan; in these cases, the participant was assumed to have been in the plan for 15 years.

[2] Includes workers in plans where the basic benefit is limited by a maximum dollar amount per confinement or per year, and other plans where the limit on the number of days of coverage applies within a specified time period.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 29. Health insurance: Percent of full-time participants in plans with basic surgical benefits by maximum allowance for selected procedures, medium and large firms, 1985

Maximum allowance	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Usual, customary, and reasonable charge	75	83	80	69
With overall dollar limit on basic surgical payments	5	4	4	5
Without overall dollar limit on basic surgical payments	70	79	76	64
Plan pays:				
80 percent	2	2	1	2
90 percent	1	2	2	(1)
95 percent	4	4	7	3
100 percent[2]	63	70	66	58
Maximum scheduled allowance	25	17	20	31
Most expensive surgical procedure:				
$201-$300	1	(1)	(1)	1
$301-$400	1	(1)	(1)	1
$401-$500	2	1	2	3
$501-$750	5	3	2	7
$751-$1000	5	3	3	6
$1001-$1250	2	2	1	2
$1251-$1500	3	2	3	4
$1501-$2000	2	3	3	1
$2001-$2500	1	1	1	1
$2501-$3000	2	1	1	2
More than $3000	2	1	2	2
Not determinable[3]	(1)	(1)	(1)	(1)
Appendectomy:				
$100 or less	(1)	-	-	(1)
$101-$150	1	(1)	1	1
$151-$200	3	2	2	4
$201-$300	8	5	5	10
$301-$400	4	4	4	5
$401-$500	2	1	1	4
$501-$750	5	3	5	6
More than $750	1	1	(1)	1
Not determinable[3]	1	(1)	2	(1)
Tonsillectomy:				
$50 or less	1	(1)	1	1
$51-$100	10	6	7	13
$101-$150	5	5	4	7
$151-$200	5	2	4	6
$201-$300	3	3	3	3
More than $300	(1)	(1)	(1)	(1)
Not determinable[3]	1	1	2	1
Hysterectomy:				
$200 or less	(1)	-	(1)	(1)
$201-$300	3	2	3	4
$301-$400	5	4	4	7
$401-$500	3	2	2	4
$501-$750	5	5	4	6
$751-$1000	4	2	3	6
$1001-$1250	1	1	1	1
More than $1250	1	1	(1)	1
Not determinable[3]	2	1	2	2

[1] Less than 0.5 percent.

[2] Includes full service benefits provided by Health Maintenance Organizations.

[3] Information necessary to classify was not provided.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 30. Health insurance: Percent of full-time participants in plans with major medical coverage by amount of deductible and applicable benefit period,[1] medium and large firms, 1985

Amount of deductible[2]	All participants			Professional and administrative participants			Technical and clerical participants			Production participants		
	Benefit period											
	Total	1-year period	Other period	Total	1-year period	Other period	Total	1-year period	Other period	Total	1-year period	Other period
Total	100	95	4	100	95	4	100	95	4	100	94	5
Deductible specified	99	95	4	99	95	4	99	95	4	99	94	5
Based on earnings[3]	5	5	-	5	5	-	6	6	-	4	4	-
Flat dollar amount	94	90	4	94	90	4	94	89	4	95	90	5
Less than $25	(4)	(4)	(4)	(4)	(4)	-	(4)	(4)	-	(4)	(4)	(4)
$25	2	1	1	2	1	1	2	1	1	2	1	(4)
$26-$49	1	1	-	1	1	-	1	1	-	1	1	-
$50	13	13	(4)	13	13	(4)	11	11	(4)	15	15	(4)
$75	3	3	(4)	2	2	(4)	2	2	(4)	4	4	(4)
$76-$99	(4)	(4)	-	1	1	-	1	1	-	(4)	(4)	-
$100	44	42	3	41	39	2	41	40	2	48	44	3
$101-$124	(4)	(4)	-	(4)	(4)	-	(4)	(4)	-	-	-	-
$125	1	1	(4)	2	1	(4)	2	2	(4)	1	1	-
$126-$149	(4)	(4)	-	(4)	(4)	-	(4)	(4)	-	(4)	(4)	-
$150	12	12	1	13	13	(4)	15	14	1	10	9	1
$151-$199	(4)	(4)	-	1	1	-	1	1	-	(4)	(4)	-
$200	13	12	1	14	14	1	13	12	1	11	11	(4)
$201-$249	(4)	(4)	-	1	1	-	1	1	-	(4)	(4)	-
$250	2	2	-	2	2	-	3	3	-	1	1	-
Over $250	2	2	-	2	2	-	2	2	-	1	1	
No deductible	1	-	-	1	-	-	1	-	-	1	-	-

[1] The deductible is the amount of covered expenses that an individual must pay before any charges are paid by the insurance plan. The benefit period is the length of time within which a single deductible requirement applies. Some plans require that expenses equal to the deductible be incurred within a shorter period, such as 90 days.

[2] Amount of deductible described is for each insured person. However, many plans contain a maximum family deductible. In some plans, the individual and family deductibles are identical.

[3] These plans have deductibles which vary by the amount of the participants' earnings. A typical provision is 1 percent of annual earnings with a maximum deductible of $150.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 31. Health insurance: Percent of full-time participants in plans with major medical coverage by coinsurance provisions,[1] medium and large firms, 1986

Final coinsurance provision	All participants					Professional and administrative participants					Technical and clerical participants					Production participants				
	Initial coinsurance																			
	Total	80 percent	85 percent	90 percent	Other	Total	80 percent	85 percent	90 percent	Other	Total	80 percent	85 percent	90 percent	Other	Total	80 percent	85 percent	90 percent	Other
Total	100	86	5	4	5	100	84	5	5	5	100	84	4	6	6	100	86	5	3	5
Final coinsurance changes to 100 percent	77	66	5	4	2	82	70	5	5	2	83	71	4	5	2	70	60	5	2	3
When covered expenses[2] reach:																				
$1-$2,000	11	11	(3)	(3)	(3)	11	11	(3)	(3)	-	10	9	(3)	(3)	(3)	12	11	-	(3)	(3)
$2,001-$4,000	20	19	(3)	(3)	1	24	23	(3)	(3)	(3)	24	23	(3)	1	(3)	16	15	(3)	(3)	1
$4,001-$6,000	25	22	1	1	(3)	28	24	2	1	(3)	27	24	1	1	1	22	20	1	1	(3)
$6,001-$8,000	8	4	3	(3)	1	8	4	3	(3)	1	8	3	2	(3)	1	9	5	3	-	1
$8,001-$10,000	9	7	(3)	1	(3)	8	5	(3)	2	(3)	12	9	(3)	3	(3)	9	7	1	1	(3)
More than $10,000	3	3	(3)	(3)	-	4	3	(3)	1	-	4	3	1	1	-	3	2	(3)	(3)	-
Final coinsurance changes to other than 100 percent	1	1	-	-	(3)	1	1	-	-	(3)	1	1	-	-	(3)	1	(3)	-	-	(3)
Coinsurance unchanged	22	19	-	1	3	17	13	-	(3)	3	16	12	-	(3)	3	29	26	-	1	2

[1] Coinsurance is the percent of covered expenses paid by the plan. The balance is paid by the employee. If coinsurance provisions varied by the category of medical care, the provision applying to hospital room and board charges was tabulated.

[2] Amount of covered expenses described is for each insured person. In rare cases, the limits for the individual and family are identical. In nearly all instances, covered expenses must reach specified amounts within a calendar year; 2 year periods are infrequent.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 32. Health insurance: Percent of full-time participants in plans with major medical coverage by maximum benefit provisions, medium and large firms, 1988

Type and dollar amount of maximum[1]	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
With maximum limits[2]	82	79	76	88
Lifetime maximum only	74	71	69	77
Less than $25,000	(3)	(3)	(3)	(3)
$25,000	1	(3)	(3)	1
$25,001-$49,999	(3)	-	-	1
$50,000	3	1	1	5
$50,001-$99,999	(3)	(3)	(3)	(3)
$100,000	3	2	1	5
$100,001-$249,999	5	3	3	7
$250,000	19	16	16	20
$250,001-$499,999	4	4	3	4
$500,000	16	16	16	15
$500,001-$999,999	1	1	1	1
$1,000,000	22	26	27	17
More than $1,000,000	(3)	1	1	(3)
Annual or disability maximum only	5	5	5	5
Both lifetime and annual or disability maximums	4	3	2	5
Without maximum limits	18	21	24	12

[1] Maximum described is for each insured person.

[2] Most plans with a lifetime maximum have a reinstatement clause. By furnishing satisfactory medical evidence of insurability, an employee can apply for restoration of the full lifetime maximum. Regardless of a member's physical condition, however, a typical plan automatically restores up to $1,000 of the major medical maximum each year.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in the category.

Table 33. Health insurance: Percent of full-time participants in plans with dental benefits by extent of coverage for selected procedures, medium and large firms, 1986

Type of dental procedure	Total	Scheduled cash allowance	Incentive schedule[1]	Subject to copayment[2]	Percent of usual, customary, and reasonable charge										Not covered
					Total	Less than 50	50	60	61-74	75	80	85	90	100[3]	
All participants															
Examinations	100	16	2	(4)	81	-	1	(4)	2	2	22	1	1	54	(4)
Dental X-rays	100	16	2	(4)	81	-	1	(4)	2	2	24	3	7	41	(4)
Fillings	100	26	3	(4)	71	-	4	1	2	6	41	3	7	7	(4)
Dental surgery	100	24	2	(4)	73	-	5	1	3	5	40	3	7	8	1
Periodontal care	100	23	2	1	72	-	7	1	3	5	39	4	7	7	2
Inlays	100	25	1	(4)	71	-	38	6	2	2	13	2	7	3	2
Crowns	100	26	2	1	70	-	38	6	2	2	13	2	7	2	2
Orthodontia	100	12	-	1	60	(4)	50	5	1	(4)	2	(4)	(4)	1	27
Professional and administrative															
Examinations	100	16	2	(4)	79	-	1	(4)	2	2	22	1	(4)	52	(4)
Dental X-rays	100	16	2	(4)	79	-	1	(4)	3	3	25	2	3	43	(4)
Fillings	100	27	2	(4)	70	-	4	1	4	5	46	2	3	6	(4)
Dental surgery	100	25	2	(4)	72	-	5	1	3	5	44	2	3	9	1
Periodontal care	100	25	2	(4)	72	-	6	1	3	4	44	2	3	6	1
Inlays	100	27	1	(4)	69	-	39	6	3	3	13	1	2	3	2
Crowns	100	27	1	(4)	69	-	39	6	3	3	13	1	2	2	2
Orthodontia	100	14	-	1	59	-	51	4	1	(4)	1	(4)	-	1	26
Technical and clerical															
Examinations	100	15	2	(4)	82	-	1	(4)	3	1	26	1	(4)	51	1
Dental X-rays	100	15	3	(4)	82	-	1	(4)	4	1	29	1	2	43	1
Fillings	100	26	3	(4)	70	-	4	1	5	5	46	2	3	6	1
Dental surgery	100	24	2	(4)	73	-	5	1	4	4	45	2	3	8	1
Periodontal care	100	24	2	1	72	-	6	1	4	4	44	2	3	7	1
Inlays	100	26	1	(4)	70	-	43	6	3	1	13	1	2	2	2
Crowns	100	26	1	1	70	-	43	6	3	1	13	1	2	2	3
Orthodontia	100	13	-	1	56	(4)	46	3	2	(4)	1	(4)	-	1	31
Production															
Examinations	100	16	2	(4)	81	-	1	(4)	1	2	19	1	1	56	(4)
Dental X-rays	100	16	2	(4)	82	-	1	(4)	2	2	21	4	12	39	(4)
Fillings	100	24	3	(4)	73	-	4	1	2	6	35	5	11	7	(4)
Dental surgery	100	22	3	(4)	74	-	5	1	2	6	35	5	11	9	1
Periodontal care	100	21	3	1	75	-	7	1	2	6	33	5	11	8	2
Inlays	100	24	2	(4)	71	-	30	7	2	2	13	4	11	3	2
Crowns	100	24	2	1	71	-	30	7	2	2	13	4	11	3	2
Orthodontia	100	11	-	1	62	-	51	6	1	(4)	3	(4)	(4)	1	26

[1] Reimbursement arrangement in which the percentage of dental expenses paid by the plan increases if regular dental appointments are scheduled.

[2] Participant pays a specific amount per procedure and plan pays all remaining expenses.

[3] Includes plans which paid the full cost.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 34. Health insurance: Percent of full-time participants in plans with dental benefits by deductible provision,[1] medium and large firms, 1985

Type of deductible[2]	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Subject to basic dental deductible[3]	61	64	66	56
Yearly deductible only	49	51	51	46
Under $25	1	1	1	1
$25	22	23	21	22
$26-$49	2	2	2	2
$50	20	22	23	17
$51-$99	2	2	2	1
$100	2	2	2	2
Over $100	(4)	(4)	(4)	(4)
Lifetime deductible only	6	6	8	6
$25	(4)	(4)	(4)	(4)
$50	5	5	7	5
Over $50	1	1	1	1
Both yearly and lifetime deductibles	6	7	8	5
Subject to major medical deductible	5	6	7	4
No deductible	34	30	27	40

[1] Excludes separate deductibles for orthodontic procedures.

[2] Amount of deductible described is for each insured person. In some plans, the individual and family deductibles are identical.

[3] Deductibles may not apply to all covered dental procedures. If separate deductibles applied to different procedures, the sum of the deductible amounts was tabulated.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 35. Health insurance: Percent of full-time participants in plans with dental benefits by yearly maximum amount of insurance,[1] medium and large firms, 1985

Dollar amount	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Yearly maximum specified[2]	90	90	91	91
Less than $500	1	(3)	(3)	1
$500	6	4	5	7
$501-$749	1	(3)	(3)	1
$750	21	20	21	21
$751-$999	1	1	(3)	2
$1,000	45	45	48	45
$1,001-$1,499	3	4	3	2
$1,500	6	8	6	5
$1,501-$1,999	1	1	1	(3)
$2,000	5	4	5	6
$2,001-$2,999	(3)	(3)	(3)	(3)
Greater than $3,000	1	1	1	1
No yearly maximum	10	10	9	9

[1] Includes all covered dental procedures except orthodontia. Amount of maximum specified is for each insured person.

[2] If separate yearly maximums applied to different procedures, the sum of the maximums was tabulated.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 36. Health insurance: Percent of full-time participants in plans with orthodontic benefits by lifetime maximum amount of coverage, medium and large firms, 1985

Dollar amount	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Lifetime maximum specified	96	96	95	96
$500	14	13	12	15
$501-$749	5	5	4	6
$750	19	17	20	19
$751-$999	14	12	9	18
$1,000	37	39	42	33
$1,001-$1,499	2	3	3	1
$1,500	3	3	3	3
Greater than $1,500	2	3	2	1
No lifetime maximum	4	4	5	4

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 37. Health insurance: Percent of full-time participants in plans with mental health benefits by extent of benefits, medium and large firms, 1985

Coverage limitation	All participants		Professional and administrative participants		Technical and clerical participants		Production participants	
	Hospital care	Outpatient care	Hospital care	Outpatient care	Hospital care	Outpatient care	Hospital care	Outpatient care
Total	100	100	100	100	100	100	100	100
With coverage	99	97	99	98	99	97	98	96
Covered the same as other illnesses	42	5	44	5	40	4	42	6
Subject to separate limitations[1]	57	91	55	93	59	93	56	90
Limit on days or visits	34	26	31	26	34	27	36	26
Limit on dollars	26	71	25	71	29	72	25	72
Major medical coinsurance limited to 50 percent	3	84	2	82	2	84	3	85
No major medical ceiling on out-of-pocket expenses	12	52	14	58	14	58	10	45
Other limitations[2]	8	17	8	16	8	15	7	18
Not covered	1	3	1	2	1	3	2	4

[1] The total is less than the sum of the individual items because many plans had more than one type of limitation on mental health coverage.

[2] Includes plans requiring copayments or a separate deductible for inpatient or outpatient care, and plans where the rate of reimbursement for outpatient care varied during the treatment period.

Table 38. Health insurance: Percent of full-time participants in plans with vision benefits by extent of benefits, medium and large firms, 1985

Benefit	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Eye examinations only	16	22	22	10
Examinations and eyeglasses	5	3	4	6
Examinations, eyeglasses, and contact lenses	65	59	56	72
Orthoptics[1] only	6	6	5	6
Other combinations	9	9	13	7

[1] Exercises to improve the function of the eye muscles.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 39. Health insurance: Percent of full-time participants by coverage for selected special benefits, medium and large firms, 1985

Benefit item	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Covered by at least one of the listed special benefits[1]	84	86	86	82
Second surgical opinion	50	56	52	46
Alcoholism treatment	68	68	70	67
Drug abuse treatment	61	61	63	60
Hearing care[2]	17	15	13	21
Hospice care	23	24	22	22
Physical examinations	13	16	17	9
Not covered by any of listed special benefits	16	14	14	18

[1] The total is less than the sum of the individual items because many participants receive more than one benefit.

[2] Plan provided, as a minimum, coverage for hearing examination expenses.

Table 40. Health insurance: Percent of full-time participants by coverage with selected cost containment features, medium and large firms, 1985

Cost containment feature	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Covered by at least one of the listed cost containment features[1]	63	65	64	61
Incentive to seek second surgical opinion	24	28	26	19
Higher coinsurance, or lower or no deductible for outpatient surgery	25	28	27	22
Reimbursement for treatment at ambulatory surgical center	39	40	40	38
Higher payment for generic prescription drugs	3	4	3	3
No or limited reimbursement for nonemergency weekend admissions to hospital	8	10	8	6
Separate deductible for hospital admission	9	10	9	8
Prehospitalization testing	46	48	47	44
Not covered by any of the listed cost containment features	37	35	36	39

[1] The total is less than the sum of the individual items because many workers participate in plans with more than one feature.

Table 41. Health insurance: Percent of full-time participants in contributory plans by type and amount of employee contribution, medium and large firms, 1985

Type and amount of contribution	All participants		Professional and administrative participants		Technical and clerical participants		Production participants	
	Single coverage	Family coverage[1]	Single coverage	Family coverage[1]	Single coverage	Family coverage[1]	Single coverage	Family coverage[1]
Total	100	100	100	100	100	100	100	100
Flat monthly amount	89	91	87	90	90	91	89	91
Less than $5.00	19	3	17	3	14	3	24	3
$5.00-$9.99	24	9	22	9	18	6	32	11
$10.00-$14.99	16	8	19	6	22	6	8	10
$15.00-$19.99	8	8	8	9	11	8	6	7
$20.00-$29.99	11	13	13	15	14	12	7	13
$30.00-$39.99	3	10	4	10	4	11	1	8
$40.00-$49.99	1	11	(2)	10	2	12	1	11
$50.00-$59.99	(2)	7	(2)	8	(2)	8	(2)	5
$60.00-$69.99	–	6	–	5	–	7	–	6
$70.00-$79.99	(2)	4	(2)	5	(2)	4	–	3
$80.00-$89.99	–	2	–	1	–	2	–	4
$90.00-$99.99	–	1	–	2	–	2	–	1
$100.00 or greater	–	4	–	4	–	6	–	3
Composite rate[3]	7	6	5	4	5	4	9	8
Amount varies by earnings	1	(2)	1	(2)	1	(2)	(2)	(2)
Amount varies by employee[4]	2	2	2	2	2	2	2	1
Contribution not determinable	8	8	9	8	7	7	8	8

[1] If the amount of contribution varied by either size or composition of family, the rate for an employee with a spouse and one child was used. For a small percentage of employees, the employee contributes the same amount for single and family coverage.

[2] Less than 0.5 percent.

[3] A composite rate is a set contribution covering more than one benefit area, for example, health insurance and sickness and accident insurance. Cost data for individual plans cannot be determined.

[4] Amount varies by options selected under a cafeteria plan or balance of employer-sponsored reimbursement account.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 42. Health insurance: Percent of full-time participants by length-of-service requirements for participation,[1] medium and large firms, 1985

Length-of-service requirement	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
With service requirement	54	39	45	68
1 month	16	15	13	19
2 months	8	4	5	11
3 months	19	12	19	22
4-5 months	4	2	1	6
6 months	7	5	7	8
7-11 months	(2)	(2)	(2)	(2)
One year	1	(2)	(2)	1
Over 1 year	(2)	–	–	(2)
Without service requirement	45	60	53	32
Service requirement not determinable	1	1	2	1

[1] Length of time employees must be on the job before they are covered by a plan that is at least partially employer financed. There is frequently an administrative time lag between completion of the requirement and the actual start of participation. If the lag was 1 month or more, it was included in the service requirement. Minimum age requirements are rare.

[2] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 43. Health insurance: Percent of full-time participants by funding medium for selected types of coverage, medium and large firms, 1985

Funding medium	Basic hospital[1]	Basic surgical	Basic medical[1]	Major medical[2]	Dental	Basic hospital[1]	Basic surgical[1]	Basic medical[1]	Major medical[2]	Dental
	All participants					Technical and clerical				
Total	100	100	100	100	100	100	100	100	100	100
Provided coverage	66	70	48	87	76	62	64	43	89	76
Blue Cross-Blue Shield	21	15	14	12	6	20	12	11	11	4
Commercial carrier	18	22	12	34	36	15	19	10	35	35
Independent health plans	25	31	20	39	32	25	31	20	39	35
Self-insured[3]	18	23	13	38	29	15	21	10	39	32
Health Maintenance Organizations[4]	7	7	7	(5)	1	10	10	10	(5)	1
Other[6]	–	–	–	–	1	–	–	–	–	1
Combined	1	2	1	3	2	2	2	1	3	3
Not provided coverage	34	30	52	13	24	38	36	57	11	24
	Professional and administrative					Production				
Total	100	100	100	100	100	100	100	100	100	100
Provided coverage	61	65	40	89	79	71	75	54	85	73
Blue Cross-Blue Shield	20	11	11	11	4	23	19	17	13	7
Commercial carrier	16	20	10	37	38	21	24	15	32	36
Independent health plans	25	32	19	39	35	26	30	21	38	29
Self-insured[3]	15	22	9	39	31	21	25	16	38	27
Health Maintenance Organizations[4]	10	10	10	(5)	1	5	5	5	(5)	1
Other[6]	–	–	–	–	2	–	–	–	–	1
Combined	1	2	1	3	2	1	2	1	2	2
Not provided coverage	39	35	60	11	21	29	25	46	15	27

[1] A plan provision was classified as a basic benefit when it covered the initial expenses incurred for a specific medical service. Under these provisions, a plan paid covered expenses in one of several ways: 1) In full with no limitation; 2) in full for a specified period of time, or until a dollar limit was reached; and 3) a cash scheduled allowance benefit that provided up to a dollar amount for a service performed by a hospital or physician. For a specific category of care, a plan may require the participant to pay a lump sum amount each disability or year (deductible) or a nominal charge each visit or procedure (copayment) before reimbursement begins or services are rendered.

[2] Major medical benefits cover many categories of expenses, some of which are not covered under basic benefits, and others for which basic coverage limits have been exhausted. These benefits are characterized by deductible and coinsurance provisions that are applied across categories of care.

[3] Includes plans that are financed by general revenues of a company on a pay-as-you-go basis, plans financed through contributions to a trust fund established to pay benefits, and plans operating their own facilities if at least partially financed by employer contributions. Includes plans that are administered by a commercial carrier through Administrative Services Only-Minimum Premium Plan (ASO-MPP) contracts and plans in which a commercial carrier provides protection only against extraordinary claims.

[4] Includes federally qualified (those meeting standards of the Health Maintenance Organization Act of 1973, as amended) and other HMOs delivering comprehensive health care on a prepayment rather than fee-for-service basis. All HMOs are included here regardless of sponsorship, e.g., Blue Cross-Blue Shield or a commercial insurance carrier.

[5] Less than 0.5 percent.

[6] Includes independent prepaid plans providing health benefits less comprehensive than those of an HMO. Dental benefits plans sponsored by local dental societies are also in this category.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 44. Life insurance: Percent of full-time participants by method of determining amount of basic life insurance and frequency of related coverages, medium and large firms, 1985

Item	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Basic life insurance[1]	100	100	100	100
Based on earnings	66	84	81	48
Multiple[2]	53	73	71	33
Graduated schedule	13	12	10	15
Flat amount	31	12	15	50
Flat amount based on service	3	3	3	2
Other[3]	(4)	(4)	(4)	(4)
With extended coverage during total and permanent disability	96	97	96	94
With accidental death and dismemberment coverage	73	70	65	79
With survivor income benefit[5]	13	12	11	14
With dependent coverage	21	21	20	20

[1] A few participants received only accidental death and dismemberment insurance.

[2] Includes plans in which insurance equaled a multiple of earnings, plus or minus a specific amount.

[3] Includes participants in plans with insurance based on pension accrued at time of the employee's death.

[4] Less than 0.5 percent.

[5] Consists of monthly income, usually a percent of earnings, for the spouse or dependent children for a specified period after death of employee.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 45. Life insurance: Percent of full-time participants in plans with multiple-of-earnings formulas[1] by amount of basic insurance and maximum coverage provisions, medium and large firms, 1985

Formula	Total	In plans without maximum coverage	In plans with maximum coverage					
			All	Less than $50,000	$50,000-$99,999	$100,000-$249,999	$250,000-$499,999	$500,000 or more
All participants								
Total	100	48	52	4	6	18	17	8
Life insurance is equal to annual earnings times:[2]								
Less than 1.0	2	2	(3)	(3)	(3)	–	–	(3)
1.0	45	24	20	3	3	9	3	1
1.1-1.4	1	(3)	1	–	–	(3)	–	(3)
1.5	8	2	6	–	1	1	4	(3)
1.6-1.9	1	–	1	(3)	–	1	–	–
2.0	33	16	17	(3)	2	5	7	3
2.1-2.4	2	1	1	–	–	–	1	(3)
2.5	2	1	1	–	(3)	(3)	(3)	(3)
2.6-2.9	(3)	–	(3)	–	(3)	–	–	–
3.0	2	1	1	–	–	1	(3)	(3)
More than 3.0	1	(3)	(3)	–	–	(3)	(3)	(3)
Multiple varying with earnings	3	1	2	(3)	–	(3)	2	–
Professional and administrative								
Total	100	49	51	3	6	18	17	7
Life insurance is equal to annual earnings times:[2]								
Less than 1.0	2	1	(3)	(3)	(3)	–	–	(3)
1.0	40	21	18	2	3	8	4	2
1.1-1.4	1	(3)	1	–	–	1	–	(3)
1.5	7	3	4	–	1	1	2	(3)
1.6-1.9	1	–	1	–	–	1	–	–
2.0	38	19	20	(3)	2	6	8	4
2.1-2.4	2	1	1	–	–	–	1	(3)
2.5	2	1	1	–	(3)	(3)	(3)	1
2.6-2.9	(3)	–	(3)	–	(3)	–	–	–
3.0	3	1	2	–	–	1	(3)	(3)
More than 3.0	1	(3)	(3)	–	–	(3)	(3)	(3)
Multiple varying with earnings	4	1	2	(3)	–	(3)	2	–
Technical and clerical								
Total	100	48	52	4	7	19	15	7
Life insurance is equal to annual earnings times:[2]								
Less than 1.0	3	2	1	(3)	1	–	–	(3)
1.0	47	25	22	2	3	10	3	2
1.1-1.4	1	(3)	1	–	–	1	–	(3)
1.5	5	2	3	–	1	1	1	(3)
1.6-1.9	1	–	1	–	–	1	–	–
2.0	33	15	18	(3)	2	6	7	3
2.1-2.4	1	1	(3)	–	–	–	(3)	(3)
2.5	3	1	1	–	1	(3)	(3)	(3)
2.6-2.9	(3)	–	(3)	–	(3)	–	–	–
3.0	2	1	2	–	–	1	(3)	1
More than 3.0	1	1	(3)	–	–	(3)	(3)	(3)
Multiple varying with earnings	4	1	3	1	–	(3)	2	–

See footnotes at end of table.

Table 45. Life insurance: Percent of full-time participants in plans with multiple-of-earnings formulas[1] by amount of basic insurance and maximum coverage provisions, medium and large firms, 1986—Continued

Formula	Total	In plans without maximum coverage	In plans with maximum coverage					
			All	Less than $50,000	$50,000-$99,999	$100,000-$249,999	$250,000-$499,999	$500,000 or more
Production								
Total	100	47	53	7	7	15	21	3
Life insurance is equal to annual earnings times:[2]								
Less than 1.0	2	2	(3)	(3)	–	–	–	(3)
1.0	50	28	22	5	3	10	3	(3)
1.1-1.4	(3)	(3)	(3)	–	–	(3)	–	(3)
1.5	12	2	11	–	1	(3)	9	(3)
1.6-1.9	2	–	2	1	–	1	–	–
2.0	27	13	14	1	1	4	7	1
2.1-2.4	2	1	(3)	–	–	–	–	(3)
2.5	2	1	1	–	1	–	1	(3)
2.6-2.9	1	–	1	–	1	–	–	–
3.0	1	1	(3)	–	–	(3)	(3)	(3)
More than 3.0	(3)	(3)	(3)	–	–	–	–	(3)
Multiple varying with earnings	2	(3)	2	(3)	–	1	1	–

[1] Includes plans in which insurance equalled a multiple of earnings, plus or minus a flat dollar amount.

[2] When the multiple-of-earnings formula varied with age, the maximum multiple was tabulated. A few plans varied the multiple-of-earnings formula according to service; in these cases, a participant was assumed to have 15 years of service.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 46. Life insurance: Percent of full-time participants in plans with flat dollar insurance[1] by amount of basic insurance, medium and large firms, 1986

Amount of insurance	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Less than $2,000	1	2	2	1
$2,000-$4,999	12	10	11	13
$5,000-$9,999	36	40	39	35
$10,000-$14,999	32	32	36	32
$15,000-$19,999	9	2	8	11
$20,000-$24,999	5	7	2	5
$25,000-$29,999	3	3	4	3
$30,000 and over	1	4	1	1

[1] Excludes participants in plans where insurance was a flat amount based on service.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 47. Life insurance: Percent of full-time participants by length-of-service requirements for participation,[1] medium and large firms, 1985

Length-of-service requirement	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
With service requirement	53	42	49	62
1 month	17	16	13	20
2 months	7	3	4	10
3 months	18	14	21	19
4-5 months	1	1	(2)	2
6 months	8	6	8	10
7-11 months	(2)	-	-	(2)
1 year	1	2	2	1
Over 1 year	(2)	1	(2)	(2)
Without service requirement	46	58	51	38
Service requirement not determinable	(2)	(2)	(2)	(2)

[1] Length of time employees must be on the job before they are covered by a plan that is at least partially employer financed. There is frequently an administrative time lag between completion of the requirement and the actual start of participation. If the lag was 1 month or more, it was included in the service requirement. Minimum age requirements are rare.

[2] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 48. Life insurance: Percent of full-time participants in basic life insurance plans by effect of retirement on coverage, medium and large firms, 1985

Effect of retirement	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Insurance continues[1]	62	64	66	59
Continues for life	60	62	65	57
Continues in full	4	4	4	3
Reduced once	30	29	31	30
Reduced more than once during retirement	26	29	29	23
Continues in form of paid-up insurance[2]	(3)	1	1	(3)
Ceases during retirement	2	2	1	2
Insurance discontinued immediately	38	36	34	41

[1] Includes plans in which coverage is fully retiree paid.

[2] Plan accumulates permanent amounts of insurance through the contributions of active employees.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Chapter 5. Defined Benefit Pension Plans

Among employees within the scope of the survey, defined benefit pension plans are the predominant type of retirement plan sponsored by employers. These plans include a formula for calculating retirement benefits and obligate the employer to provide the benefits so determined. In 1985, four-fifths of the employees were covered by defined benefit pension plans—a proportion that has held relatively steady since 1980. (Other sources of retirement income, such as savings plans, will be discussed in chapter 6.)

Benefit formulas (tables 49-53). Earnings-based formulas applied to seven-tenths of the employees covered by defined benefit pension plans. Plans including these formulas pay a percent of the employee's annual earnings per year of service. Variations are common in the approach to calculating annual earnings and the rate paid per year of service. For 82 percent of the participants with earnings-based formulas, pensions were based on earnings in the final years of employment (terminal earnings formula); for the remainder, an average of career earnings was used. Terminal earnings were defined as the average over a 5-year period for 84 percent of the participants with terminal earnings formulas. Such formulas usually designated the 5 consecutive years with the highest earnings out of the last 10 years before retirement.

A majority of participants with earnings-based formulas—half of those with terminal earnings and over two-thirds with career earnings formulas—were in plans having benefit rates per year of service that varied according to service, earnings, or age. Career earnings formulas typically applied one rate to annual earnings below a specified amount, and a higher rate above that amount. For example, a plan will credit an employee with 1 percent of earnings up to the first $12,000 in each year of service plus 1.5 percent of the excess earnings. The annual pension payment is the sum of these credits. The balance of formulas applied a uniform rate to all earnings. These uniform rates averaged 1.62 percent per year of service in terminal earnings formulas and 1.55 percent in career earnings formulas. Thus, terminal earnings formulas not only provide a higher earnings base than career formulas,[14] but the percentage rates also are on average higher. However, benefits under a terminal earnings formula were more likely to be offset by a retiree's Social Security payments. (See next section.)

Most plans that did not use a percent-of-earnings benefit formula specified a dollar amount to be paid for each year of service, such as $15 a month per year of service, yielding a pension of $450 after 30 years. Dollar-amount formulas applied to 29 percent of pension plan participants. While the dollar amount in these formulas sometimes varied with an employee's earnings or service, the predominant method was to multiply a uniform dollar amount by years of service. Uniform amounts credited per year averaged $14.83 a month.

The basis of payment differed sharply by employee group. While a large majority of white-collar participants were provided earnings-based pensions, dollar-amount formulas applied to half of the blue-collar participants.

Thirty-six percent of all participants were in pension plans providing benefits from either primary or alternative formulas, whichever was greater. Alternative formulas were often included to provide at least a minimum level of benefits for persons with short service or low earnings. For example, a plan may have a primary formula of 1.25 percent of career average earnings times years of service, and an alternative formula of $15 a month for each year of service. In this case, the alternative formula would provide a higher benefit for persons with career average annual earnings less than $14,400.

Private benefits and Social Security payments (table 54). Employers providing private retirement plans also share the cost of Social Security coverage equally with their employees. Because many plan sponsors feel that private pension and Social Security benefits should not be duplicative, formulas for calculating private pensions often contain an offset provision requiring part of the Social Security pension to be subtracted from the annuity. Other plans have "excess" formulas that apply lower pension benefit rates to an employee's earnings below a specified level (which is either the Social Security taxable wage base—usually the career average—or a dollar amount equal to a past taxable wage base).

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[14] An employee who worked 30 years with a 5-percent pay increase each year and who earned $25,000 in the last year of service would have career average earnings of $13,451 a year, while the final 5-year average would be $22,730. The difference between the career and final averages lessens with shorter lengths of service.

Sixty-one percent of all participants were in plans where benefit formulas were "integrated" with Social Security. Terminal earnings formulas of integrated plans tended to adopt the offset approach, while career earnings formulas tended to incorporate the excess approach. Dollar amount formulas were rarely coordinated with Social Security; blue-collar employees, therefore, were less likely to have integrated benefits.[15]

Maximum benefit provisions (table 55). The Employee Retirement Income Security Act (ERISA) places ceilings on the size of annual pension benefits from defined benefit plans. This restriction largely affects only highly compensated employees. Many plans, however, have provisions that restrict benefit levels for all participants. For example, one-third of participants were in plans that limited the number of years of service included in benefit computation; maximums of 30 or 35 years were most common. For 8 percent of the participants, annual pensions (usually including Social Security payments) could not exceed a specified percent of average annual career or terminal earnings.

Replacement rates (table 56). A commonly used indicator of pension adequacy is the portion of a retiree's final year's earnings that is "replaced" by the retirement benefit. To calculate replacement rates under 1985 pension plans, the maximum private benefit under each surveyed plan, not reduced for early retirement or joint-and-survivor annuity, was determined under several assumed combinations of final annual earnings and years of service. These benefit levels were then expressed as percents of earnings in the last year of employment. The calculations assume employees retired on January 1, 1985, and final earnings are for 1984.[16]

Table 56 presents average replacement rates resulting from defined benefit pension plans alone and in combination with primary Social Security benefits (that is, excluding benefits for spouse and other dependents).[17] For private pension formulas that are integrated with Social Security and for computation of Social Security benefits, the worker is assumed to have retired at age 65 and paid into Social Security for 40 years. (For workers who reached age 65 in 1985, however, the Social Security benefit was the same for workers with similar final earnings who had 25 years or more under Social Security.)

Chart 4 displays replacement rates based on 30 years of service for each of the earnings assumptions. Except for the lowest earnings assumption ($15,000), the private pension plan replaced on average about 27 percent of the final year's earnings; the rate for $15,000 was about 31 percent.

When combined with primary Social Security payments available at age 65, however, replacement rates differed substantially as earnings increased—ranging from nearly three-fourths at the lowest assumed level to just under one-half at the highest earnings level computed. Except for the two highest assumed levels of final earnings ($35,000 and $40,000), the primary Social Security benefit was larger than the average private pension.

Although private pension replacement rates for white-collar employees increased slightly at higher earnings levels, rates for blue-collar workers dropped by almost a third. Table 49 provides an explanation: Half of all production workers have dollar amount formulas, paying workers with the same years of service the same benefit, regardless of earnings history. The result is a steady decrease in the replacement rate as final earnings increase. Average replacement rates for earnings-based formulas, on the other hand, increase slightly with higher final earnings.

While average replacement rates show a consistent relationship between pensions and service, earnings, and type of formula, the range of pensions payable is quite broad. Chart 5 shows that calculated monthly pensions for employees retiring with 20 or 30 years' service and final earnings of $30,000 varied from less than $200 to $1,000 or higher.[18]

Normal retirement (table 57). Although full Social Security benefits are not available before age 65, most private pension plan participants were not required to work to that age for full private pensions (normal retirement). Thirty-three percent were covered by plans that specified age 65 as the earliest age for normal retirement, down from 45 percent in 1980. While employees in plans specifying age 65 usually did not have to satisfy a minimum service requirement, plans permitting normal retirement at earlier ages typically had length-of-service requirements. Ten to fifteen years' service were required for half of the 38 percent of participants who could first retire at ages 60 through 64; 20 or 30 years were typically needed for retirement at ages 55 through 59 (affecting 6 percent of participants).

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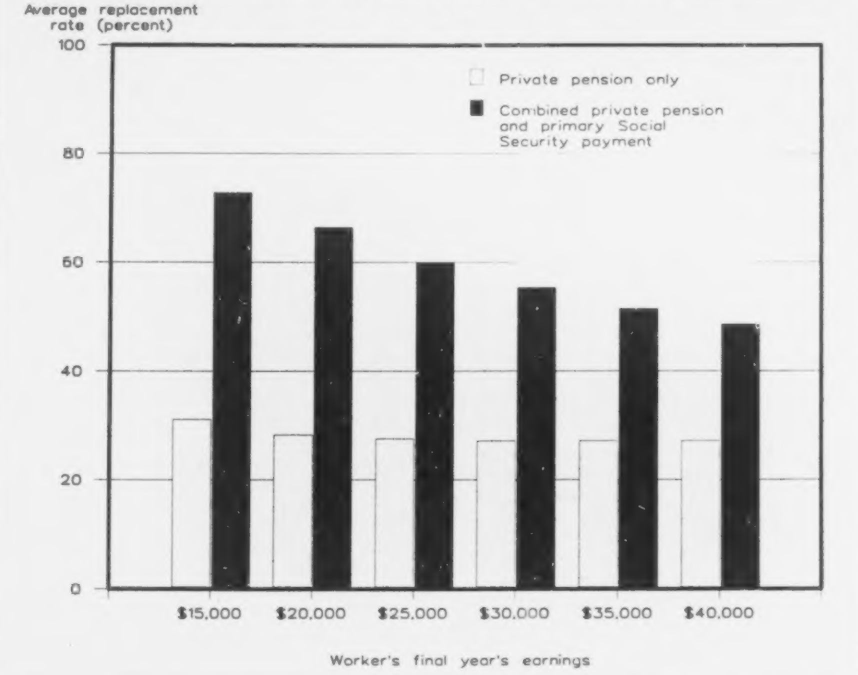
[15] For a comprehensive analysis of formulas with Social Security integration characteristics, see Donald Bell and Diane Hill, "How Social Security Payments Affect Private Pensions," *Monthly Labor Review*, May 1984, pp. 15–20.

[16] Earnings histories, necessary for applying the pension formulas, were constructed for each final earnings level based on data provided by the Social Security Administration.

[17] The Social Security spouse benefit, which is 50 percent of the primary benefit, is paid in addition to the primary benefit while both partners are alive (unless the spouse is eligible for a larger primary benefit).

[18] For a more complete discussion of replacement rates, see Donald G. Schmitt, "Today's Pension Plans: How Much Do They Pay?" *Monthly Labor Review*, December 1985, pp. 19–25.

Chart 4. Replacement rates under pension plans including and excluding Social Security payments: Average benefits based on 30 years of service, medium and large firms, 1985



Another 10 percent of participants could qualify when the sum of age plus service reached a specific amount, such as 85. A minimum age of 55 was generally included for meeting these requirements. Minimum lengths of service were less common.

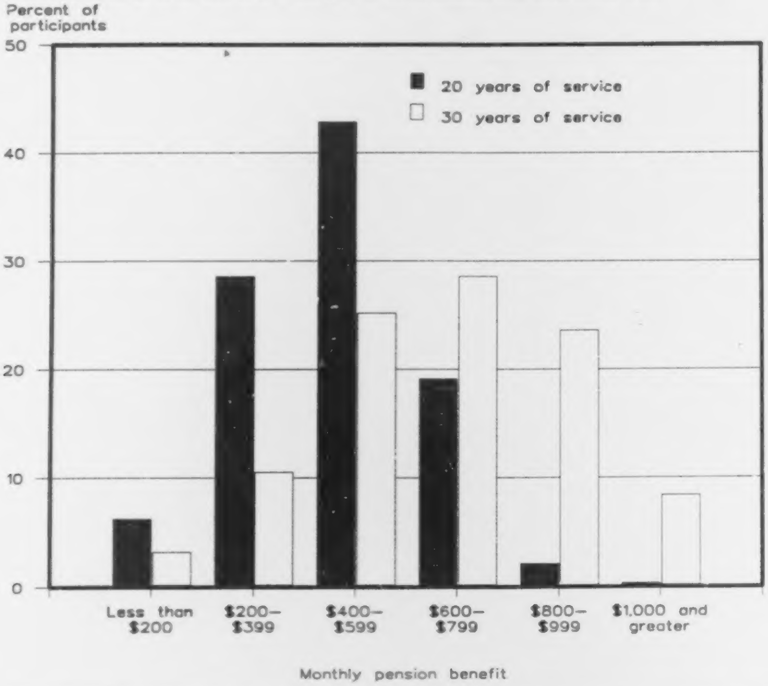
Fourteen percent of all participants were covered by plans permitting normal retirement at any age with 30 years of service; the major concentration (19 percent) was among production workers. Plans which featured such a provision almost always offered other normal retirement opportunities at specified ages with lower service requirements. (If a plan had alternative age and service requirements, the earliest age and associated service were tabulated for this survey; if one alternative did not specify an age, it was the requirement that was tabulated.)

Early retirement (tables 58 and 59). Virtually all of the employees participating in a pension plan could retire before normal retirement age and receive an immediate, reduced pension. In some cases, employer approval was required for such early retirement benefits.

The amount of an early retirement pension is lower for two reasons: First, fewer years of service are applied to the benefit formula because an employee has not worked until normal retirement age. Second, because benefits begin at an earlier age, the retiree is expected to receive plan payments over a longer period of time.

The normal benefit is reduced by a percentage (factor) for each year between the actual and normal retirement ages. If a plan's normal retirement age is 62, for example, and the reduction factor is 6 percent, a person retiring at age 59 would receive 82 percent of the normal formula amount (100 percent minus 3 years times 6 percent). It should be recognized, however, that in addition to the 18-percent reduction for early retirement, the annuity in this example would be based on

Chart 5. Monthly benefits under private defined benefit pension plans: Distribution of participants assuming earnings of $30,000 in the final year of work, medium and large firms, 1985



fewer years of service and possibly lower earnings than at age 62.

The reduction factor may be uniform or may vary by age or service. Reduction factors that differed for each year of early retirement, based on the employee's life expectancy at that age (actuarial reductions) were used in plans covering one-eighth of participants with early retirement opportunities. Other methods of reduction, however, often approximate an actuarial reduction. For example, for over a third of the participants, the reduction factor differed for age brackets of several years instead of changing each year. Just under one-half of the participants had uniform reduction factors, most commonly 6 percent for each year of early retirement. A few plans applied reduction factors that vary by length of service.

Two-thirds of all participants were covered by plans permitting early retirement at age 55; generally, 10 to 15 years of service were required. Twelve percent of all participants could retire earlier than age 55 if service requirements were satisfied. Ten percent of the participants in plans with early retirement could qualify when the sum of age plus service reached a specific amount. Such plans usually included minimum service requirements ranging from 1 to 25 years; age requirements of 50, 55, or 56 were sometimes specified.

The early retirement pension for 14 percent of participants was supplemented by additional monthly payments if employees retired after meeting a specified age or length-of-service requirement higher than the minimum needed to retire. Plan sponsors include these special early retirement benefits either to induce older workers to retire or as a reward for long service. Supplemental benefits from the private pension help to fill the gap during the period between retirement and the start of Social Security payments. Generally, supplemental payments end when Social Security payments begin (either reduced payments at age 62 or full benefits at age 65), and the reduced pension is then payable for life. (At least half of the retirement pension for most employees in this study will be Social Security payments—see section on replacement rates.) Other employers elect to offer similar incentives outside of formal plan provisions to employees who retire within a specified time period.[19]

Disability retirement (table 60). A career-ending disability may entitle an employee to a pension before the normal retirement age. If the disability satisfies the plan's definition of total disability, pension benefits often begin immediately. When an employer provides other sources of disability income, such as long-term disability insurance, the disability retirement benefit might be deferred until the other forms of income have ceased. Eighty-five percent of pension plan participants were covered by disability retirement provisions in 1985. Each year since first tabulated in 1980, employees in plans with immediate disability retirement have outnumbered those in plans with benefits deferred to normal or early retirement age. The latter, however, increased by 10 percentage points over the period to 40 percent of the pension participants in 1985.

Seventy-nine percent of the production workers with disability retirement coverage were in plans with immediate benefits. White-collar workers with disability benefits in their pension plans were more likely to be in plans with deferred benefits. Workers with deferred benefits were usually given long-term disability insurance (LTD) benefits which typically provided 50 or 60 percent of earnings at the time of disability; this was more than that generally provided by pension plans with immediate disability retirement.[20] Furthermore, most deferred retirement benefits were greater than immediate pensions, primarily because the time during which LTD benefits were paid was typically added to an employee's length of service for computation of pension benefits. (See Chapter 3 for details of LTD benefit plans.)

Requirements for disability retirement were usually based on specified years of service such as 10 years or more. Sixteen percent of the participants, however, had no age or service requirement for disability retirement, and 20 percent had to meet the qualifications for the LTD plan, which usually had a minimal service requirement.

Postponed retirement (table 61). Employees who continue on the job after age 65 rarely receive private pensions before retirement. Moreover, postponed retirement is rarely fully reflected in the size of pension benefits by both crediting the service after age 65 and adjusting pensions upward for the shorter retirement period. Nevertheless, slightly less than one-half of the participants were in plans that made some allowance for postponed retirement.

Thirty-nine percent of all participants were in plans with benefit formulas that included credit for service after age 65; 20 percent were subject to limits on the number of credited years (frequently, only years up to age 68 or 70). A number of plans with earnings-based benefit formulas recognized earnings levels after age 65, even when service was not credited for these years. Production workers were more likely than white-collar employees to receive full credit for service after age 65. Collectively-bargained multiemployer plans, accounting for 8 percent of blue-collar participants, frequently provide for employer contributions to the pension fund for covered employees regardless of age.

In contrast to early retirees, who typically receive reduced pensions over an extended time period, late retirees seldom receive pensions that are increased to compensate for the shorter time they will draw benefits. Only 8 percent of the participants were in plans that actuarially adjust the size of pensions or increase the payment by a specified percentage for each additional year of work beyond the normal retirement age.

Postretirement pension increases (table 62). Inflation can severely erode the purchasing power of a fixed pension throughout a worker's retirement years. Forty-three percent of pension plan participants were in plans which increased pensions for current retirees at least once during the 1980-84 period. Most of these increases were discretionary, or ad hoc, rather than automatic adjustments. The amounts of ad hoc increases were not directly linked to a cost-of-living index. Instead, retirees' current pensions were usually increased by either a percentage varying by the length of retirement, or a dollar amount per year of service. The latter type of increase more often affected the pensions of production workers, and frequently resulted from collective bargaining agreement provisions.

Since the survey reports only the number of current employees covered by pension plans and not the number of retirees, it cannot specify the proportion of annuitants actually receiving postretirement pension increases. A rough measure of the incidence of postretirement increases among pensioners can be derived by assuming that the number of retirees is proportionate to the number of active plan participants. Thus, since 41 percent of the pension plan participants were in plans granting ad hoc increases, it can be assumed that about two-fifths of the retirees received pension increases.

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[19] David H. Gravitz and Frederick W. Rumack, "Opening the Early Retirement 'Window,'" *Personnel*, March/April 1983, pp. 53–57.

[20] For a more complete discussion of disability retirement, see Donald Bell and William Wiatrowski, "Disability Benefits for Employees in Private Pension Plans," *Monthly Labor Review*, August 1982, pp. 36–40.

The same approach was used to estimate the size of pension increases. For each plan granting an ad hoc increase during the 1980-84 period, the amount of increase was computed using three retirement periods (5, 10, and 15 years) and two monthly pension amounts ($250 and $750) in effect on December 31, 1979. These increases were then averaged, using as weights the number of active workers participating, to provide surveywide estimates for each example. As shown in the tabulation below, the length of retirement was a significant factor in determining the size of pension adjustments, with larger increases paid to persons retired longest. Also, where maximum increases were specified, retirees with higher original pensions had lower percentage increases.

Monthly pension on December 31, 1979	*Years of retirement*		
	5	*10*	*15*
$250:			
Average pension on December 31, 1984	$286	$306	$322
Percent change, December 31, 1979–84	14	22	29
$750:			
Average pension on December 31, 1984	$828	$886	$929
Average change, December 31, 1979–84	10	18	24

The BLS Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) rose 41 percent over the 5-year period studied.[21] For retirees in plans with ad hoc adjustments, and with monthly pensions and years of retirement shown above, average adjustments were two-thirds or less of the price rise.

Only about 4 percent of all participants were in plans that provided for automatic increases in pension benefits to compensate for increases in the cost of living. In most instances, the cost-of-living-adjustment formulas provided for benefit adjustments proportional to increases in the BLS Consumer Price Index. Nevertheless, ceilings on individual increases limited periodic adjustments to 3 percent or less for most of the covered workers. Nearly all of the affected participants were in plans calling for annual adjustments. Lifetime ceilings on increases were uncommon.

Vesting (table 63). Even when an employee leaves an employer without qualifying for either a normal, early, or disability retirement benefit, a pension may ultimately be paid. If certain conditions are satisfied at the time of separation, workers have a vested right in all or a significant portion of their accrued pension benefits and may begin receiving benefits years later. Although all pension participants are entitled to vested benefits under ERISA, some variations exist as to when this occurs. Most pension plans require 10 years of service before benefits are guaranteed. While over two-thirds of the participants were covered by the 10-year rule regardless of age, one-sixth were affected by the plan sponsor's right to exclude years of service before a specified age in determining vesting eligibility.[22]

Unreduced vested pension payments begin at a plan's normal retirement age, based on the benefit formula in effect when an employee left the plan. Also, terminated and vested participants can receive a reduced pension under a plan's early retirement provision if the participant had satisfied the corresponding service requirement when leaving the plan.

For terminated and vested employees who wish to receive a pension beginning at the early retirement age, the benefit must be at least the actuarial equivalent of what would have been received starting at age 65. Although under ERISA the reduction factor used in determining the pension for a terminated employee can be more severe than for early retirement, the same factor was used in plans covering 77 percent of the participants with early retirement provisions.

Postretirement survivor benefits (table 64). ERISA also requires the availability of a form of pension in which at least 50 percent of the retiree's payments continue to the spouse after the retiree's death. When this type of pension—called a joint-and-survivor annuity—is paid, the employee will receive a lower benefit during retirement since payments are likely to be made over a longer period of time. When the retiree dies, the spouse will receive part or all of the retiree's monthly pension benefits.[23]

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[21] The rate of increase was determined by dividing the annual average CPI-W for 1984 by the annual average CPI-W for 1979. For a discussion of postretirement increases, see Donald G. Schmitt, "Postretirement Increases under Private Pension Plans," *Monthly Labor Review*, September 1984, pp. 3–8.

[22] The Retirement Equity Act of 1984, among other provisions, amended ERISA by lowering from 25 to 21 the age after which employers must enroll workers in defined benefit and defined contribution plans, and lowering from 22 to 18 the age after which employees must earn vesting credits. In addition, the act requires that the spouse of a deceased vested employee be entitled to survivor benefits regardless of age at death. For most plans, provisions of the act were effective for plan years beginning after December 31, 1984. Since deadlines for compliance were spread throughout 1985, previous ERISA rules were still in effect at the time some establishments were visited. (Collectively bargained plans must comply by January 1, 1987.)

[23] ERISA requires that the joint-and-survivor coverage be automatic for married retirees, and that waiver of this option must be requested in writing. The Retirement Equity Act (see footnote 22) further directs that spouse coverage can be waived only if both husband and wife sign the written request. For a more complete discussion of survivor benefits, see Donald Bell and Avy Graham, "Surviving Spouse's Benefits in Private Pension Plans," *Monthly Labor Review*, April 1984, pp. 23–31.

Joint-and-survivor annuities are based on an actuarial or arithmetic reduction of the employee's pension. One-fifth of the participants were in plans offering only a joint-and-survivor option that provides a surviving spouse 50 percent of the retiree's adjusted pension. Nearly two-thirds of participants had a choice of two or more alternative percentages (frequently 50, 67, and 100 percent) to be continued to the spouse, with corresponding reductions in their annuities.

Preretirement survivor benefits (table 65). Nearly all participants were in plans providing for survivor payments in case the employee died before retirement. Pensions usually had to be vested before any death benefits were payable.[24] For over seven-tenths of the participants, a surviving spouse would receive an annuity equivalent to the amount payable if the employee had retired on the day prior to death with a joint-and-survivor form of payment in effect. Most survivor pensions of this nature were based on an early retirement benefit and were provided at no cost to the employee. However, for 15 percent of participants (down from 24 percent in 1980), preretirement joint-and-survivor protection involved an extra employee cost and was available only if elected. The cost was usually paid by the employee through a small deduction in the pension ultimately payable to either employee or spouse.

Employee contributions. The employer paid the full cost of defined benefit pension plans for 90 percent of the participants. Since 1980, the proportion of production participants required to contribute to the cost of their plan has risen from 5 to 10 percent. Of the employees who had to pay part of the cost, virtually all paid a percent of earnings. The majority of participants in contributory plans paid one rate (usually 2 to 4 percent) on earnings above a specified level, and a lower rate (or frequently zero) below that earnings level. The annual earnings level at which this break occurred ranged from $3,000 to $39,600, the Social Security taxable wage base in effect during 1985. Plans with varying employee contributions usually coordinate private benefits with Social Security payments; as discussed earlier, pension benefit rates used in these plans are higher on earnings above the Social Security taxable wage base. One sixth of the participants in contributory plans paid a flat rate—none paid more than 3 percent.

Participation requirements (table 66). Two-fifths of the employees with pension plans had immediate coverage. Another one-fourth could participate regardless of age but had a service requirement, seldom more than 1 year. The remaining employees could not enter their employer's pension plan until they reached a specified age and completed 1 year of service, the most restrictive requirement permitted under ERISA.[25]

Three-fifths of pension participants were in plans with a maximum age, usually 59, beyond which newly hired employees were not eligible. Maximum age conditions are permitted under ERISA regulations as long as the specified age is within 5 years of a plan's normal retirement age.

Both minimum and maximum age provisions occurred less frequently in plans covering blue-collar workers than in plans for white-collar workers.

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[24] See footnote 22 for changes required by the Retirement Equity Act.

[25] See footnote 22 regarding the Retirement Equity Act's changes to ERISA, effective during 1985.

Table 49. Defined benefit pension plans:[1] Percent of full-time participants by method of determining retirement payments, medium and large firms, 1985

Basis of payment[2]	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Terminal earnings formula	57	76	75	36
No alternative formula	27	35	42	16
Terminal earnings alternative	8	12	11	5
Career earnings alternative	3	5	4	2
Dollar amount alternative[3]	17	23	18	12
Percent of contributions alternative	1	1	(4)	1
Career earnings formula	13	19	12	10
No alternative formula	7	12	7	4
Career earnings alternative	(4)	(4)	(4)	(4)
Dollar amount alternative[3]	5	6	5	5
Dollar amount formula[3]	29	5	13	52
No alternative formula	28	5	12	50
Dollar amount alternative[3]	1	-	(4)	1
Percent of contributions alternative	(4)	(4)	(4)	(4)
Percent of contributions formula	1	(4)	(4)	2
No alternative formula	1	(4)	(4)	2

[1] Excludes supplemental pension plans.

[2] Alternative formulas are generally designed to provide a minimum benefit for employees with short service or low earnings.

[3] Includes formulas based on dollar amounts for each year of service and schedules of benefits that vary by length of service.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 50. Defined benefit pension plans:[1] Percent of full-time participants in plans with percent of terminal earnings benefit formulas by type and amount of formula, medium and large firms, 1985

Type and amount of formula[2]	Total	Provision for maximum benefit[3]		Provision for integration with Social Security benefit	
		Subject to maximum	Not subject to maximum	With integrated formula	Without integrated formula
All participants					
Total	100	100	100	100	100
Flat percent per year of service	50	61	39	44	81
Less than 1.00	(4)	–	1	–	3
1.00-1.24	6	5	6	(4)	36
1.25-1.49	5	1	10	4	16
1.50-1.74	24	31	17	25	18
1.75-1.99	5	7	3	6	–
2.00-2.24	7	14	1	7	6
2.25 or greater	2	3	(4)	2	–
Percent per year varies	50	39	61	55	19
By service	18	14	22	16	19
By earnings	26	22	26	30	–
By age	1	–	3	2	–
By earnings and service	5	2	8	6	–
Other[5]	(4)	1	–	1	–
Professional and administrative					
Total	100	100	100	100	100
Flat percent per year of service	51	61	41	47	85
Less than 1.00	(4)	–	1	–	3
1.00-1.24	5	5	4	(4)	36
1.25-1.49	3	1	6	3	7
1.50-1.74	27	31	24	27	33
1.75-1.99	7	6	6	8	–
2.00-2.24	7	13	2	7	6
2.25 or greater	2	3	(4)	2	–
Percent per year varies	48	37	59	52	15
By service	17	13	22	18	15
By earnings	27	23	31	30	–
By age	1	–	1	1	–
By earnings and service	3	2	5	4	–
Other[5]	1	1	–	1	–
Technical and clerical					
Total	100	100	100	100	100
Flat percent per year of service	48	64	34	43	86
Less than 1.00	(4)	–	(4)	–	2
1.00-1.24	3	4	2	(4)	24
1.25-1.49	8	1	13	5	26
1.50-1.74	22	31	14	21	27
1.75-1.99	6	9	3	7	–
2.00-2.24	7	14	1	7	8
2.25 or greater	2	3	1	2	–
Percent per year varies	51	35	66	56	11
By service	20	11	27	21	11
By earnings	24	22	25	27	–
By age	3	–	5	3	–
By earnings and service	5	1	8	6	–
Other[5]	1	2	–	1	–
Production					
Total	100	100	100	100	100
Flat percent per year of service	49	57	41	42	74
Less than 1.00	1	–	1	–	3
1.00-1.24	10	6	14	–	47
1.25-1.49	8	(4)	10	3	16
1.50-1.74	22	30	15	27	4
1.75-1.99	2	4	1	3	–
2.00-2.24	7	14	(4)	6	4
2.25 or greater	1	3	–	2	–
Percent per year varies	51	43	59	58	26
By service	18	19	17	16	26
By earnings	25	21	29	32	–
By age	1	–	1	1	–
By earnings and service	7	3	11	9	–
Other[5]	(4)	(4)	–	(4)	–

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[1] Excludes supplemental pension plans.

[2] If a plan contained more than one terminal earnings formula, a primary formula was selected and tabulated.

[3] These maximum provisions are independent of ERISA-imposed ceilings on pensions payable from defined benefit plans.

[4] Less than 0.5 percent.

[5] Formula was a flat percentage of earnings, graded by length of service.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 51. Defined benefit pension plans:[1] Percent of full-time participants in plans with terminal earnings formulas by definition of terminal earnings, medium and large firms, 1985

Definition of terminal earnings	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Three years	12	13	11	10
Last 3	1	2	2	(²)
High 3	3	3	3	4
Of last 5	1	1	1	(²)
Of last 10	2	2	1	3
Of career	(²)	(²)	(²)	(²)
High consecutive 3	7	8	7	7
Of last 5	(²)	(²)	(²)	-
Of last 10	6	6	5	5
Of career	1	1	1	2
Five years	84	85	85	83
Last 5	4	5	5	3
High 5	11	9	11	12
Of last 10	7	7	6	9
Of last 15	(²)	(²)	(²)	-
Of career	3	2	5	2
Other	(²)	(²)	(²)	(²)
High consecutive 5	70	70	70	68
Of last 10	55	55	53	58
Of last 15	1	1	1	1
Of career	13	14	16	9
Other period[3]	4	2	4	7

[1] Excludes supplemental pension plans.

[2] Less than 0.5 percent.

[3] Formulas based on earnings during period other than 3 or 5 years' service, or periods not immediately before retirement (for example, first 5 of last 10 years' service).

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 52. Defined benefit pension plans:[1] Percent of full-time participants in plans with percent of career earnings benefit formulas by type and amount of formula, medium and large firms, 1985

Type and amount of formula[2]	Total	Provision for maximum benefit[3]		Provision for integration with Social Security benefit	
		Subject to maximum	Not subject to maximum	With integrated formula	Without integrated formula
All participants					
Total	100	100	100	100	100
Flat percent per year of service	31	20	32	11	92
Less than 1.00	3	–	4	–	13
1.00-1.24	3	–	3	–	11
1.25-1.49	6	–	6	6	9
1.50-1.74	12	9	12	1	45
1.75-1.99	1	–	1	1	–
2.00-2.24	4	–	5	1	18
2.25 or greater	2	11	1	2	–
Percent per year varies	66	80	67	89	4
By service	4	7	4	4	4
By earnings	60	60	63	83	–
By age	1	13	–	1	–
Other[5]	1	–	1	–	5
Professional and administrative					
Total	100	100	100	100	100
Flat percent per year of service	38	17	40	10	92
Less than 1.00	4	–	4	–	10
1.00-1.24	2	–	2	–	5
1.25-1.49	4	–	4	4	3
1.50-1.74	24	9	25	2	66
1.75-1.99	(4)	–	(4)	1	–
2.00-2.24	3	–	3	(4)	8
2.25 or greater	2	8	2	3	–
Percent per year varies	60	83	58	90	3
By service	4	10	4	5	3
By earnings	55	62	54	83	–
By age	1	11	–	1	–
Other[5]	2	–	2	–	5

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[1] Excludes supplemental pension plans.

[2] If a plan contained more than one career earnings formula, a primary formula was selected and tabulated. Table includes plans with career earnings formulas that serve as an alternative to a terminal earnings formula.

[3] These maximum provisions are independent of ERISA-imposed ceilings on pensions payable from defined benefit plans.

[4] Less than 0.5 percent.

[5] Formula was a flat percentage of earnings, graded by length of service.

NOTE: Data were insufficent to show technical-clerical and production workers separately. Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 53. Defined benefit pension plans:[1] Percent of full-time participants in plans with dollar amount benefit formulas[2] by type and amount of formula, medium and large firms, 1985

Type and amount of formula[3]	Total	Provision for maximum benefit[4]	
		Subject to maximum	Not subject to maximum
All participants			
Total	100	100	100
Flat monthly amount per year of service	66	74	64
Less than $5.00	3	5	3
$5.00-$9.99	10	14	9
$10.00-$14.99	18	25	14
$15.00-$19.99	28	10	33
$20.00-$24.99	4	8	3
$25.00-$29.99	2	6	(5)
$30.00 or greater	2	6	1
Amount per year varies by service	6	18	5
Amount per year varies by earnings	28	8	30
Production			
Total	100	100	100
Flat monthly amount per year of service	69	79	66
Less than $5.00	4	5	4
$5.00-$9.99	11	15	10
$10.00-$14.99	18	24	16
$15.00-$19.99	27	11	31
$20.00-$24.99	4	7	3
$25.00-$29.99	3	10	1
$30.00 or greater	3	6	1
Amount per year varies by service	7	12	6
Amount per year varies by earnings	24	9	28

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[1] Excludes supplemental pension plans.

[2] Excludes plans with dollar amount formulas that serve as a minimum benefit alternative to a percent of earnings formula.

[3] If a plan contained more than one dollar amount formula, a primary formula was selected and tabulated.

[4] These maximum provisions are independent of ERISA-imposed ceilings on pensions payable from defined benefit plans.

[5] Less than 0.5 percent.

NOTE: Data were insufficient to show professional-administrative and technical-clerical workers separately. Because of rounding, sums of individual items may not equal totals.

Table 54. Defined benefit pension plans:[1] Percent of full-time participants by provision for integration of pension with Social Security benefit, medium and large firms, 1985

Provision	Total[2]	Type of benefit formula[3]		
		Terminal earnings	Career earnings	Dollar amount
All participants				
Total	100	100	100	100
With integrated formula	61	89	75	1
Offset by Social Security payment[4]	40	69	14	1
Based on service[5]	32	56	9	1
Not based on service[6]	8	13	5	-
Dollar amount	(7)	(7)	-	-
Percent of payment	8	13	5	-
Pure excess[8]	2	4	2	-
Step-rate excess[9]	25	28	63	-
Integrated with a Social Security breakpoint	10	11	24	-
Integrated with a specific dollar breakpoint	15	18	39	-
Without integrated formula	39	11	25	99
Professional and administrative				
Total	100	100	100	100
With integrated formula	82	92	65	2
Offset by Social Security payment[4]	55	70	12	2
Based on service[5]	44	57	7	2
Not based on service[6]	11	14	5	-
Dollar amount	(7)	(7)	-	-
Percent of payment	11	13	5	-
Pure excess[8]	3	5	1	-
Step-rate excess[9]	33	28	54	-
Integrated with a Social Security breakpoint	15	13	24	-
Integrated with a specific dollar breakpoint	19	15	31	-
Without integrated formula	18	8	35	98
Technical and clerical				
Total	100	100	100	100
With integrated formula	79	91	74	2
Offset by Social Security payment[4]	56	72	24	2
Based on service[5]	47	61	13	2
Not based on service[6]	10	11	11	-
Dollar amount	(7)	(7)	-	-
Percent of payment	10	11	11	-
Pure excess[8]	3	4	1	-
Step-rate excess[9]	27	26	52	-
Integrated with a Social Security breakpoint	14	12	27	-
Integrated with a specific dollar breakpoint	14	13	25	-
Without integrated formula	21	9	26	98
Production				
Total	100	100	100	100
With integrated formula	39	84	88	-
Offset by Social Security payment[4]	23	63	9	-
Based on service[5]	18	49	8	-
Not based on service[6]	5	15	1	-
Dollar amount	(7)	(7)	-	-
Percent of payment	5	15	1	-
Pure excess[8]	2	4	2	-
Step-rate excess[9]	19	28	80	-
Integrated with a Social Security breakpoint	6	8	21	-
Integrated with a specific dollar breakpoint	14	20	59	-
Without integrated formula	61	16	12	100

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[1] Excludes supplemental pension plans.

[2] Includes plans with benefit formulas based on a percent of employee or employer contributions.

[3] If a plan contained more than one benefit formula based on terminal earnings, career earnings, or dollar amounts, each integrated formula was tabulated. Participants were included as under nonintegrated formulas only if none of the formulas was integrated.

[4] Benefit as calculated by formula is reduced by portion of primary Social Security payment.

[5] Offset is equal to the product of a percent of primary Social Security payments and the participant's years of service with the employer. A maximum offset is frequently applied, for example, 50 percent.

[6] Benefit formula includes a reduction by a specified percent of primary Social Security payments or a specific dollar amount. Although generally offsets of up to 83.33 percent are permitted by the Internal Revenue Service for plan qualification, offsets in excess of 50 percent are uncommon.

[7] Less than 0.5 percent.

[8] Formula does not apply to earnings subject to FICA (Social Security) taxes or below a specific dollar breakpoint.

[9] Formula applies lower benefit rate to earnings subject to FICA (Social Security) taxes or below a specific dollar breakpoint.

NOTE: Sums of individual items may not equal totals either because of rounding or because more than one benefit formula within a plan was integrated. Dash indicates no employees in this category.

Table 55. Defined benefit pension plans:[1] Percent of full-time participants by maximum benefit provisions,[2] medium and large firms, 1985

Maximum benefit provision	Total[3]	Type of benefit formula[4]		
		Terminal earnings	Career earnings	Dollar amount
All participants				
Total	100	100	100	100
Subject to maximum	40	58	8	26
Limit on years of credited service	34	51	8	19
Less than 20	2	1	1	2
20	1	1	2	1
21-24	(5)	-	-	(5)
25	2	3	2	2
26-29	(5)	2	-	-
30	12	18	2	6
31-34	1	2	-	2
35	10	12	-	3
36-39	1	5	(5)	(5)
40	5	8	1	3
More than 40	(5)	-	1	-
Other maximum[6]	8	10	3	9
Not subject to maximum	60	42	92	74
Professional and administrative				
Total	100	100	100	100
Subject to maximum	47	61	8	29
Limit on years of credited service	41	55	8	19
Less than 20	3	1	1	5
20	1	(5)	2	(5)
25	3	3	2	2
26-29	1	1	-	-
30	15	18	1	6
31-34	1	1	-	(5)
35	12	19	-	(5)
36-39	1	1	-	-
40	7	9	1	5
More than 40	(5)	-	1	-
Other maximum[6]	10	10	2	11
Not subject to maximum	53	39	92	71
Technical and clerical				
Total	100	100	100	100
Subject to maximum	46	56	15	26
Limit on years of credited service	41	51	14	19
Less than 20	3	2	1	(5)
20	1	1	4	3
21-24	(5)	-	-	(5)
25	4	4	2	5
26-29	1	(5)	-	-
30	15	18	4	6
31-34	2	2	-	2
35	11	16	-	2
36-39	1	1	-	-
40	6	7	2	2
More than 40	(5)	-	-	-
Other maximum[6]	8	8	4	8
Not subject to maximum	54	44	85	74
Production				
Total	100	100	100	100
Subject to maximum	32	58	5	26
Limit on years of credited service	26	47	4	19
Less than 20	1	-	1	1
20	2	1	(5)	2
25	2	1	(5)	2
26-29	(5)	(5)	-	-
30	9	19	1	4
31-34	2	2	-	2
35	6	15	-	4
36-39	(5)	(5)	-	(5)
40	4	6	-	2
More than 40	(5)	-	1	-
Other maximum[6]	6	12	2	9
Not subject to maximum	68	42	95	74

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[1] Excludes supplemental pension plans.

[2] These maximum provisions are independent of ceilings on pensions payable from defined benefit plans imposed by the Employee Retirement Income Security Act.

[3] Includes plans with benefit formulas based on a percent of employee or employer contributions.

[4] If a plan contained more than one benefit formula based on terminal earnings, career earnings, or dollar amounts, each formula containing a maximum benefit provision was tabulated. Participants were included as under formulas without maximum benefit provisions only if none of the formulas contained a maximum.

[5] Less than 0.5 percent.

[6] The benefit yielded under the formula is limited to either a percent of terminal or career earnings, often coordinated with primary Social Security payments, or to a flat dollar amount.

NOTE: Sums of individual items may not equal totals because more than one benefit formula within a plan may have a maximum benefit provision. Also, some benefit formulas contain a limit on years of credited service and another maximum provision. Dash indicates no employees in this category.

Table 58. Defined benefit pension plans:[1] Average replacement rates for specified final earnings and years of service,[2] medium and large firms, 1985

Final annual earnings	Years of service						
	10	15	20	25	30	35	40
	Private pension only						
All participants							
$15,000	10.9	16.0	21.2	26.4	31.4	35.9	39.8
$20,000	9.8	14.4	19.1	23.8	28.3	32.3	35.7
$25,000	9.5	14.1	18.6	23.2	27.6	31.3	34.5
$30,000	9.5	14.1	18.6	23.1	27.3	30.9	34.0
$35,000	9.6	14.2	18.7	23.1	27.3	30.8	33.7
$40,000	9.6	14.3	18.8	23.2	27.4	30.8	33.6
Professional and administrative							
$15,000	10.6	15.5	20.5	25.4	30.3	34.6	38.3
$20,000	10.1	14.8	19.6	24.4	29.0	33.0	36.4
$25,000	10.2	15.2	20.0	24.8	29.5	33.5	36.7
$30,000	10.6	15.7	20.7	25.6	30.3	34.3	37.4
$35,000	10.9	16.2	21.4	26.4	31.1	35.0	38.1
$40,000	11.2	16.7	21.9	27.0	31.8	35.8	38.8
Technical and clerical							
$15,000	10.6	15.6	20.6	25.7	30.5	34.8	38.5
$20,000	10.2	15.0	19.8	24.7	29.3	33.4	36.7
$25,000	10.4	15.4	20.4	25.3	29.9	33.9	37.2
$30,000	10.7	15.9	21.0	26.1	30.7	34.6	37.9
$35,000	11.0	16.4	21.6	26.8	31.4	35.3	38.5
$40,000	11.3	16.8	22.2	27.4	32.1	36.0	39.1
Production							
$15,000	11.2	16.5	22.0	27.3	32.5	37.2	41.3
$20,000	9.4	13.9	18.4	23.0	27.4	31.3	34.8
$25,000	8.7	12.8	17.0	21.2	25.2	28.8	31.8
$30,000	8.3	12.2	16.2	20.0	23.8	27.1	30.0
$35,000	8.0	11.9	15.7	19.4	22.9	26.0	28.6
$40,000	7.9	11.6	15.3	18.9	22.3	25.2	27.7
	Combined private pension and primary[3] Social Security benefit						
All participants							
$15,000	52.5	57.6	62.8	68.0	73.0	77.5	81.4
$20,000	48.2	52.8	57.5	62.2	66.7	70.7	74.1
$25,000	42.3	46.8	51.4	55.9	60.3	64.1	67.2
$30,000	37.6	42.2	46.7	51.1	55.4	59.0	62.0
$35,000	34.0	38.6	43.1	47.6	51.7	55.2	58.1
$40,000	31.1	35.8	40.3	44.7	48.9	52.3	55.1
Professional and administrative							
$15,000	52.2	57.1	62.1	67.0	71.9	76.2	79.9
$20,000	48.5	53.2	58.0	62.8	67.4	71.4	74.7
$25,000	43.0	47.9	52.7	57.6	62.3	66.2	69.4
$30,000	38.8	43.8	48.8	53.7	58.4	62.3	65.5
$35,000	35.4	40.7	45.8	50.8	55.5	59.4	62.5
$40,000	32.7	38.2	43.4	48.6	53.4	57.3	60.3
Technical and clerical							
$15,000	52.2	57.2	62.2	67.3	72.1	76.4	80.1
$20,000	48.5	53.4	58.2	63.1	67.7	71.7	75.1
$25,000	43.1	48.2	53.1	58.1	62.7	66.6	69.9
$30,000	38.7	44.0	49.1	54.1	58.8	62.7	65.9
$35,000	35.4	40.9	46.1	51.2	55.8	59.6	62.9
$40,000	32.8	38.4	43.7	48.9	53.6	57.5	60.6

See footnotes at end of table.

Table 56. Defined benefit pension plans:[1] Average replacement rates for specified final earnings and years of service,[2] medium and large firms, 1985—Continued

Final annual earnings	Years of service: 10	15	20	25	30	35	40
	Combined private pension and primary[3] Social Security benefit						
Production							
$15,000	52.8	58.1	63.6	68.9	74.1	78.8	82.9
$20,000	47.8	52.2	56.8	61.4	65.8	69.7	73.2
$25,000	41.5	45.6	49.7	53.3	58.0	61.5	64.5
$30,000	36.3	40.3	44.2	48.1	51.9	55.2	58.0
$35,000	32.5	36.3	40.1	43.8	47.4	50.4	53.1
$40,000	29.4	33.1	36.8	40.4	43.8	46.8	49.2

[1] Excludes supplemental pension plans.

[2] Retirement annuity as a percent of earnings in the final year of work. The maximum private pension available to an employee, not reduced for early retirement or joint-and-survivor annuity, was calculated under each pension plan using the earnings and service assumptions shown. This benefit level was then expressed as a percent of earnings in the last year of employment.

These calculations assume employees retired on January 1, 1985, and final earnings are for 1984. Earnings histories, necessary for applying the pension formulas, were constructed for each final earnings level based on data provided by the Social Security Administration.

For private pension formulas that are integrated with Social Security (see table 54) and for computation of Social Security benefits, the worker is assumed to have retired at age 65 and paid into Social Security for 40 years. Computations exclude 1 percent of participants in plans with benefits based on career contributions.

[3] Excludes benefits for spouses and other dependents.

Table 57. Defined benefit pension plans:[1] Percent of full-time participants by minimum age and associated service requirements for normal retirement,[2] medium and large firms, 1985

Age and service requirements[3]	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
No age requirement	14	7	11	20
Less than 30 years' service	(4)	-	-	(4)
30 years' service	14	7	11	19
More than 30 years' service	(4)	(4)	(4)	1
Less than age 55	(4)	-	-	(4)
30 years' service	(4)	-	-	(4)
Age 55	4	6	1	3
20 years' service	1	5	(4)	(4)
30 years' service	2	1	1	3
More than 30 years' service	(4)	(4)	(4)	(4)
Age 56-59	2	1	1	3
15 years' service	(4)	-	-	1
20 years' service	(4)	-	(4)	1
More than 30 years' service	1	1	1	2
Age 60	14	16	16	11
No service requirement	4	4	4	3
1-5 years' service	(4)	1	(4)	(4)
10 years' service	4	3	3	4
15 years' service	1	2	1	(4)
20 years' service	(4)	(4)	1	(4)
25 years' service	(4)	(4)	1	(4)
30 years' service	3	4	4	3
More than 30 years' service	1	2	2	(4)
Age 61	1	1	1	1
No service requirement	(4)	(4)	(4)	(4)
20-years' service	(4)	(4)	(4)	1
26-29 years' service	(4)	(4)	1	(4)
Age 62	22	24	24	20
No service requirement	4	5	5	2
5 years' service	1	1	1	(4)
10 years' service	11	10	9	13
11-14 years' service	(4)	(4)	(4)	(4)
15 years' service	2	3	3	(4)
20 years' service	2	2	2	3
25 years' service	1	(4)	1	(4)
30 years' service	2	2	3	1
Age 63-64	1	1	3	(4)
No service requirement	(4)	(4)	(4)	-
10 years' service	1	1	3	(4)
Age 65	33	30	32	35
No service requirement	29	28	30	30
1-4 years' service	(4)	-	(4)	(4)
5 years' service	1	1	1	2
10 years' service	2	1	2	3
Sum of age plus service[5]	10	14	11	6
Equals less than 80	2	3	3	1
Equals 80	1	1	(4)	1
Equals 85	4	7	3	3
Equals 90	2	2	3	1
Equals 91-94	1	1	1	1
Equals 95 or more	(4)	(4)	(4)	(4)

[1] Excludes supplemental pension plans.

[2] Normal retirement is defined as the point at which the participant could retire and immediately receive all accrued benefits by virtue of service and earnings, without reduction due to age.

[3] If a plan had alternative age and service requirements, the earliest age and associated service were tabulated; if one alternative did not specify an age, it was the requirement tabulated.

[4] Less than 0.5 percent.

[5] In some plans, participants must also satisfy a minimum age or service requirement.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 58. Defined benefit pension plans:[1] Percent of full-time participants by minimum age and associated service requirements for early retirement,[2] medium and large firms, 1985

Age and service requirements[3]	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Participants in plans permitting early retirement	97	98	98	97
No age requirement	4	7	2	3
Less than 30 years' service	(4)	1	(4)	(4)
30 years' service	4	6	2	3
Less than age 55	8	4	13	7
No service requirement	(4)	(4)	(4)	(4)
5 years' service	(4)	(4)	(4)	(4)
10 years' service	3	2	4	2
15 years' service	1	1	1	(4)
20 years' service	1	1	(4)	(4)
25 years' service	4	(4)	7	4
Age 55	67	72	70	63
No service requirement	9	10	8	9
1-4 years' service	(4)	(4)	1	(4)
5 years' service	3	5	4	1
6-9 years' service	(4)	(4)	(4)	-
10 years' service	43	44	43	42
11-14 years' service	(4)	1	(4)	(4)
15 years' service	8	9	10	7
20 years' service	3	3	4	3
25 years' service	(4)	(4)	(4)	(4)
Age 56-59	1	2	1	1
15 years' service	(4)	(4)	(4)	-
30 years' service	1	2	1	1
Age 60	7	2	3	12
No service requirement	(4)	(4)	1	(4)
1-5 years' service	(4)	-	-	1
10 years' service	4	2	2	7
15 years' service	2	1	(4)	3
20 years' service	(4)	(4)	(4)	(4)
Age 62	(4)	(4)	(4)	1
10 years' service	(4)	-	(4)	1
20 years' service	(4)	(4)	(4)	(4)
Sum of age plus service[5]	10	10	10	9
Equals 70 or less	2	4	4	1
Equals 75	1	1	1	(4)
Equals 76-79	1	1	2	1
Equals 80	1	1	1	(4)
Equals 85	4	2	2	7
Equals 90 or more	(4)	(4)	(4)	-
Participants in plans without early retirement	3	2	2	3

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[1] Excludes supplemental pension plans.

[2] Early retirement is defined as the point at which a worker could retire and immediately receive accrued benefits based on service and earnings but reduced for each year prior to normal retirement age.

[3] If a plan had alternative age and service requirements, the earliest age and associated service were tabulated; if one alternative did not specify an age, it was the requirement tabulated.

[4] Less than 0.5 percent.

[5] In some plans, participants must also satisfy a minimum age or service requirement.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 59. Defined benefit pension plans:[1] Percent of full-time participants in plans permitting early retirement by reduction factor for immediate start of payments, medium and large firms, 1985

Reduction for each year prior to normal retirement age	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Uniform percentage[2]	49	44	50	51
Less than 3.0	2	4	1	2
3.0	10	10	11	8
3.1-3.9	2	3	2	2
4.0	7	7	8	6
4.1-4.9	3	2	2	5
5.0	7	8	11	5
5.1-5.9	(3)	-	-	(3)
6.0	14	7	14	19
6.7	2	(3)	1	3
6.8-7.1	(3)	(3)	1	(3)
7.2	1	1	(3)	1
7.3 or more	(3)	(3)	(3)	(3)
Percentage varies by age	49	50	49	49
Reduction differs for each year of early retirement[4]	13	11	11	15
Reduction differs by age bracket[5]	36	39	38	34
Percentage varies by service	2	6	1	(3)
Other basis[6]	(3)	-	-	(3)

[1] Excludes supplemental pension plans.

[2] In specific cases, uniform percentage reductions may approximate actuarial reductions, such as early retirement at age 55 with a 6 percent a year reduction between age 55 and the plan's normal retirement age of 62.

[3] Less than 0.5 percent.

[4] Reduction schedule is related to actuarial assumptions of the life expectancy at age that pension payments begin.

[5] Rate of reduction is held constant within age brackets, but differs among brackets, sometimes in approximation of an actuarial table. For example, benefits may be reduced by 6.7 percent for each year between age 60 and the plan's normal retirement age, and by 3.3 percent for each year retirement precedes age 60. Also includes some plans which reduce benefits arithmetically for each year immediately below normal retirement age and actuarially below a specified age, usually 55.

[6] Reduced benefit was not derived from normal retirement formula.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 60. Defined benefit pension plans:[1] Percent of full-time participants by provisions for disability retirement, medium and large firms, 1985

Characteristic	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Percent of participants in plans with disability retirement benefits	85	82	81	88
Minimum requirements for disability retirement				
Total	100	100	100	100
No age or service	16	18	19	13
Age only	(2)	-	1	(2)
Service only	54	45	39	66
Age and service	10	7	10	11
Meets qualification for long-term disability benefits	20	30	32	10
Benefit provisions				
Total	100	100	100	100
Immediate disability retirement[3]	60	43	41	79
Unreduced normal formula[4]	47	33	32	61
Reduced normal formula[5]	6	5	3	7
Other than normal formula[6]	8	5	6	11
Deferred disability retirement	40	57	59	21
With benefits based on:				
Service when disabled	7	7	9	6
Service plus credit to early retirement date or later	32	48	49	15
Service with some credit	1	1	1	(2)

[1] Excludes supplemental pension plans.

[2] Less than 0.5 percent.

[3] Immediate disability pensions may be supplemented by additional allowances until an employee reaches a specified age or becomes eligible for Social Security.

[4] The disabled worker's pension is computed under the plan's normal benefit formula and is paid as if retirement had occurred on the plan's normal retirement date, either based on years of service actually completed or projected to a later date.

[5] The disabled worker's pension is computed under the plan's normal benefit formula, based on years of service actually completed, and then reduced for early receipt.

[6] The disabled worker's benefit is not computed by the plan's normal benefit formula. The methods used include flat amount benefits, dollar amount formulas, percent of unreduced normal benefits less Social Security, and percent of earnings formulas both with and without Social Security offsets.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 61. Defined benefit pension plans:[1] Percent of full-time participants by provision for credit for service after age 65, medium and large firms, 1985

Type of credit	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
No credit for service	61	65	68	56
Pension deferred with no change in amount	54	57	58	50
Pension deferred, but increased actuarially	5	5	6	4
Pension deferred, but increased by percent per additional year of service[2]	2	3	3	1
Pension begins at age 65	(3)	(3)	(3)	(3)
Credit for service, with no actuarial increase for later retirement age[4]	37	33	31	43
All service credited	18	14	16	20
Service credited to specified maximum age	19	17	14	22
Service credited to specified maximum years of service	1	2	1	(3)
Credit for service, with actuarial increase for later retirement age[5]	1	2	1	2
All service credited	1	1	1	1
Service credited to specified maximum age	(3)	(3)	(3)	(3)
Service credited to specified maximum years of service	(3)	-	-	(3)

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[1] Excludes supplemental pension plans.

[2] The pension amount computed at age 65 is increased by a specified percent (not part of the benefit formula) for each year the employee remains active.

[3] Less than 0.5 percent.

[4] Additional service is included in the benefit formula, but the pension is not increased for later retirement date.

[5] Additional service is included in the benefit formula and the pension is increased for later retirement date.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 62. Defined benefit pension plans:[1] Percent of full-time participants in plans granting ad hoc postretirement annuity increases,[2] medium and large firms, 1985

Characteristics	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Percent of participants in plans with at least one postretirement increase in the 1980-84 period	41	39	39	43
Number of increases granted in past 5 years				
Total	100	100	100	100
One	51	58	64	42
Two	21	19	15	24
Three	10	10	12	10
Four	11	7	5	15
Five or more	5	3	2	8
Data not available	2	3	2	1
Provision for minimum increase in most recent adjustment				
Total	100	100	100	100
No minimum	81	78	75	86
With minimum	17	22	22	13
Monthly dollar amount	17	21	21	13
$5.00	1	3	2	(3)
$6.00-$9.00	(3)	1	(3)	(3)
$10.00	8	9	8	7
$11.00-$14.00	1	(3)	(3)	1
$15.00	3	3	5	2
$20.00	1	2	1	1
$25.00	2	1	2	3
More than $25.00	1	2	2	-
Percent of present benefit	(3)	1	1	-
Greater of a monthly dollar amount or a percent of present benefit	(3)	1	(3)	(3)
Not determinable	2	2	3	1
Provision for maximum increase in most recent adjustment				
Total	100	100	100	100
No maximum	74	72	69	78
With maximum	24	26	28	20
Monthly dollar amount	6	7	7	5
$100.00 or less	3	4	4	2
$101.00-$150.00	1	2	2	1
$151.00-$200.00	(3)	1	(3)	-
More than $200.00	1	1	1	2
Percent of present benefit	18	19	20	16
Less than 10	8	5	10	9
10-14	6	9	6	4
15-19	1	2	1	(3)
30 or more	3	3	3	3
Greater of a monthly dollar amount or a percent of present benefit	(3)	(3)	(3)	(3)
Not determinable	2	2	3	1

See footnotes at end of table.

Table 62. Defined benefit pension plans:[1] Percent of full-time participants in plans granting ad hoc postretirement annuity increases,[2] medium and large firms, 1985—Continued

Characteristics	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Benefit formula for most recent increase				
Total	100	100	100	100
Flat increase	36	36	38	36
Monthly dollar amount	3	1	(3)	6
Less than $10.00	1	-	-	2
$10.00	1	-	-	1
$15.01-$20.00	1	(3)	(3)	1
More than $20.00	(3)	(3)	(3)	1
Varies by date of retirement	(3)	(3)	(3)	(3)
Percent of present benefit	33	36	38	29
Less than 5.0	7	6	8	6
5.0	2	1	1	2
5.1-7.4	2	2	1	1
7.5-9.9	3	4	3	2
10.0	1	3	2	(3)
10.1-14.9	1	1	1	1
15.0	1	1	1	1
More than 15.0	(3)	(3)	(3)	(3)
Varies by date of retirement	17	18	21	14
Type of flat increase not determinable	(3)	-	-	1
Increase per year of retirement	37	42	44	31
Monthly dollar amount	1	2	1	1
Percent of present benefit	36	40	43	31
Less than 2.0	7	6	7	7
2.0	5	5	5	5
2.1-2.4	(3)	(3)	(3)	-
3.0	4	5	6	2
4.0	1	(3)	3	1
4.1-4.9	10	10	13	8
5.0	5	6	4	5
6.0	2	3	3	(3)
More than 6.0	(3)	-	-	(3)
Varies by date of retirement	3	5	3	3
Increase per year of service	21	15	12	29
Monthly dollar amount	20	14	11	28
Less than $.50	2	-	(3)	4
$.50	3	4	3	3
$1.00	3	2	2	4
$1.01-$1.99	4	1	2	5
$2.00	1	1	1	1
More than $2.00	1	2	1	1
Varies by date of retirement	6	4	2	10
Percent of present benefit	1	2	(3)	1
Combination of two or more benefit formulas	4	4	3	3
Type of formula not determinable	1	2	3	(3)

[1] Excludes supplemental pension plans.

[2] Unscheduled increases in pension payments for employees retiring prior to 1985. Excludes one-time lump sum payments.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 63. Defined benefit pension plans:[1] Percent of full-time participants by type of vesting schedule, medium and large firms, 1985

Type of vesting schedule	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total[2]	100	100	100	100
Cliff vesting,[3] with full vesting after:				
10 years of service at any age	69	64	59	76
10 years of service after age 18	7	11	9	4
10 years of service after age 19 or later[4]	10	8	13	10
Other[5]	2	2	1	2
Graduated vesting,[6] with full vesting after:				
15 years of service[7]	3	3	4	2
Other[5]	10	11	13	7
Vesting provision not determinable	1	2	1	(8)

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[1] Excludes supplemental pension plans.

[2] Because plans may adopt alternative vesting schedules, sums of participants covered by individual vesting schedules may exceed 100 percent.

[3] Under a cliff vesting schedule, an employee is not entitled to any benefits accrued under a pension plan until satisfying the requirement for 100 percent vesting. The Employee Retirement Income Security Act (ERISA) specifies 10 years as the maximum requirement for this form of vesting.

[4] The Retirement Equity Act of 1984 requires that sponsors of most pension plans count years of service completed after age 18 towards satisfaction of minimum vesting requirements. For noncollectively bargained plans, this requirement takes effect for plan years beginning on or after January 1, 1985. However, collectively bargained plans need not comply until the earlier of: (1) the expiration date of the collective bargaining agreement, or (2) January 1, 1987.

[5] Includes both participants in plans containing vesting schedules more liberal than ERISA standards and, for graduated vesting, in plans adopting other ERISA standards.

[6] Graduated vesting schedules give an employee rights to a gradually increasing share of accrued pension benefits, determined by years of service and eventually reaching 100 percent vesting status.

[7] Participants in this group were in plans that adopted ERISA's longest time span for graduated vesting, which calls for 25 percent vesting with 5 years of service, with the vested percentage increasing 5 percentage points each year for 5 succeeding years, then 10 percentage points for each of the next 5 years. Thus, 15 years is the maximum requirement for this form of vesting.

[8] Less than 0.5 percent.

Table 64. Defined benefit pension plans:[1] Percent of full-time participants by provision for postretirement survivor annuity, medium and large firms, 1985

Type of annuity for surviving spouse	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Spouse's share of joint-and-survivor annuity[2] only	91	94	94	87
50 percent of retiree's pension	19	15	17	22
51-99 percent of retiree's pension	5	4	2	7
100 percent of retiree's pension	2	2	2	1
Alternative percentages at retiree's option	65	74	72	57
Spouse's share of joint-and-survivor annuity plus portion of retiree's pension	1	1	(3)	2
Portion of retiree's accrued pension only	8	5	6	10

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[1] Excludes supplemental pension plans.

[2] An annuity that provides income during the lifetime of both the retiree and the surviving spouse. The accrued pension will usually be actuarially reduced at retirement because of the longer length of time that payments are expected to be made. ERISA requires that plans provide this annuity as an automatic form of pension payment. Employees and their spouses must waive the spouse annuity in writing if they desire a pension during the employee's lifetime only or another option offered by the plan, such as guarantee of payments for a specified period.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 65. Defined benefit pension plans:[1] Percent of full-time participants by provision for preretirement survivor annuity, medium and large firms, 1985

Type of annuity for surviving spouse	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Preretirement survivor annuity provided	100	100	100	100
Equivalent of joint and survivor annuity[2]	72	71	68	75
Based on early retirement[3]	67	65	61	70
Less than 50 percent of employee pension	(4)	-	-	(4)
At extra employee cost[5]	(4)	-	-	(4)
50 percent of employee pension	51	49	47	54
At extra employee cost[5]	14	14	11	14
51-99 percent of employee pension	8	5	5	11
At extra employee cost[5]	1	(4)	(4)	1
100 percent of employee pension	3	5	4	3
At extra employee cost[5]	(4)	(4)	(4)	-
Alternative percentages of pension at employee's option	4	6	5	3
At extra employee cost[5]	1	1	1	1
Based on normal retirement[6]	6	6	7	5
At extra employee cost[5]	(4)	(4)	(4)	(4)
Portion of accrued employee benefit	25	24	30	22
Reduced for early retirement	14	13	17	13
Unreduced for early retirement	8	9	11	7
Based on service projected to normal retirement date	2	2	2	2
Other annuity[7]	3	4	3	3
No preretirement survivor annuity provided[8]	(4)	(4)	(4)	(4)

[1] Excludes supplemental pension plans.

[2] The spouse annuity is computed as if the employee had retired with a joint-and-survivor annuity. That is, the accrued pension is first reduced because of the longer length of time that payments were expected to be made to both the retiree and the surviving spouse. The spouse's share is then the specified percent of the reduced amount.

[3] Survivor annuity is based upon the benefit the employee would have received if early retirement had occurred on the date of death.

[4] Less than 0.5 percent.

[5] Plan reduces the accrued employee pension benefit for each year survivor protection is in force.

[6] Survivor annuity is based on the benefit the employee would have received if eligible for normal retirement on the date of death.

[7] Includes annuity based on a dollar amount formula or percent of earnings.

[8] The Retirement Equity Act of 1984 requires that most pension plans provide an automatic annuity for the surviving spouse of an employee with vested benefits at the time of death. For noncollectively bargained plans, this requirement takes effect for plan years beginning on or after January 1, 1985. However, collectively bargained plans need not comply until the earlier of: (1) the expiration date of the collective bargaining agreement, or (2) January 1, 1987.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 69. Defined benefit pension plans:[1] Percent of full-time participants by age and length-of-service requirements for participation,[2] medium and large firms, 1986

Age and service requirement provisions[3]	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Minimum requirement				
Total	100	100	100	100
With minimum age and/or service requirement	58	59	67	54
Service requirement only	23	21	23	24
3 months or less	1	(4)	(4)	1
6 months	2	1	1	3
1 year	18	18	19	18
2 years	(4)	-	-	(4)
3 years	1	(4)	1	1
Over 3 years	1	1	2	1
Age 20 or less	1	1	1	(4)
1-11 months of service	(4)	(4)	1	(4)
1 year	(4)	1	(4)	(4)
Age 21	15	21	20	10
No service requirement	2	2	2	1
1-6 months of service	1	1	1	1
1 year[5]	13	19	17	8
Age 22 or greater	19	16	24	19
No service requirement	1	2	2	1
1-11 months of service	1	1	1	1
1 year	17	14	21	18
Without minimum age and/or service requirement	40	39	30	45
Age and service requirement not determinable	2	2	2	1
Maximum age requirement				
Total	100	100	100	100
With maximum age limitation[6]	61	68	69	54
Without maximum age limitation	39	32	31	46

[1] Excludes supplemental pension plans.

[2] Excludes maximum 6-month administrative time lags allowed by ERISA. Most plans with time lags adopt the beginning of designated 6-month periods as participation dates.

[3] If a plan had alternate participation requirements, one of which was service only, the service only requirement was tabulated.

[4] Less than 0.5 percent.

[5] The Retirement Equity Act of 1984 requires that, for plan years beginning on or after January 1, 1985, nearly all plans must allow participation to full-time employees who have reached age 21 and who have completed one year of service. Collectively bargained plans need not comply until the earlier of: (1) the expiration date of the collective bargaining agreement, or (2) January 1, 1987.

[6] ERISA legislation permits plan administrators to impose a maximum age for participation. Maximum age must be within 5 years of the plan's normal retirement date.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Chapter 6. Defined Contribution Plans

Fifty-three percent of the employees within the scope of the 1985 survey (two-thirds of the white-collar workers and two-fifths of the blue-collar workers) participated in one or more defined contribution plans.[26] These plans, which are wholly or partly financed by employers, are designed to provide retirement income or asset accumulation, or both. Accordingly, for the purposes of this survey, BLS classified all defined contribution plans into one of two categories: Retirement plans or capital accumulation plans. Retirement plans, as defined in this study, do not allow withdrawal of employer contributions until retirement age, death, disability, separation from service, age 59 1/2, or hardship. Capital accumulation plans, on the other hand, impose less stringent restrictions for withdrawal of employer contributions. Examples of these less stringent restrictions include permitting only 1 or 2 withdrawals per year, or imposing a service requirement of 2 or 5 years before withdrawal.[27]

Of the 92 percent of employees participating in retirement (including defined benefit pension) or capital accumulation plans, 71 percent were in retirement plans only, 20 percent in both retirement and capital accumulation plans, and 1 percent in capital accumulation plans only (table 67).

As noted in chapter 5, 8 of 10 employees in medium and large firms participated in a defined benefit pension plan. But when defined contribution retirement plans are considered along with defined benefit pension plans, retirement coverage rises to 91 percent of employees.

Whether for retirement or capital accumulation, defined contribution plans usually specify a contribution rate by the employer, but not a formula for determining benefits, as in a defined benefit pension plan. Instead, individual accounts are set up for participants, and benefits are based on amounts credited to these accounts, plus investment earnings.

As shown in table 68, various types of defined contribution plans are available for retirement and capital accumulation purposes: 27 percent of the employees participated in savings and thrift plans, 24 percent in employee stock ownership plans, 18 percent in profit sharing plans, 4 percent in money purchase pension plans, and 1 percent in stock bonus plans.[28] Another 3 percent of the employees were either currently purchasing company stock, through payroll deductions, at less than market price (stock purchase plans) or were eligible to purchase stock in the future at a designated price (stock option plans). Many employees participated in more than one defined contribution plan (table 69).

Nearly seven-tenths of the participants in defined contribution retirement plans had their benefits wholly financed by the employer. In contrast, capital accumulation plans were jointly financed for 84 percent of the participants. A large majority of capital accumulation plans were savings and thrift plans, which involve employer matching of employee contributions.

Defined contribution plans typically supplement a defined benefit or money purchase pension plan. For example, 93 percent of the participants in savings and thrift plans and employee stock ownership plans (ESOPs), respectively, were also covered by a pension plan. Because savings and thrift plans and ESOPs are relatively recent developments, they have largely been introduced into medium and large firms which already had pension plans. However, half of the participants in profit sharing plans did not have a pension plan. From the opposite point of view, half of the employees with pension plans also had one or more defined contribution plans. White-collar workers were more likely than blue-collar workers to receive a defined contribution plan in addition to a pension. While five-eighths of white-collar workers with pensions also had a defined contribution plan, three-eighths of blue-collar workers had such coverage.

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[26] The 41-percent figure cited in the April 24, 1986 news release, "Retirement Coverage Widespread in Medium and Large Firms, 1985," USDL: 86-166, applied only to defined contribution retirement plans, as defined later in this paragraph.

[27] BLS used these definitions for analytic purposes, but it should be noted that most defined contribution plans can be used to provide retirement income or accumulate financial assets. Capital accumulation plans may provide retirement income, because withdrawals of the employer's contributions are voluntary, not mandatory. Similarly, defined contribution retirement plans can be used to accumulate assets, because these plans nearly always permit pre-retirement withdrawals of the employer's contributions (for example, at age 59 1/2, upon termination of employment prior to retirement, or upon disability). Many of these plans also permit employees to receive a lump sum, rather than an annuity, upon retirement.

[28] A money purchase pension plan provides for a pension annuity or other form of retirement income that is determined by fixed contribution rates plus earnings credited to the employee's account. A stock bonus plan is a plan whereby the employer or the employee and the employer jointly contribute to a trust fund which invests in various securities. Proceeds from the investments are usually paid to the employees in the form of company stock. Savings and thrift, employee stock ownership, and profit sharing plans are described later in this chapter.

Salary reduction plans (table 70)

For the first time, the 1985 survey developed information on salary reduction or 401(k) plans that allow participants to reduce their current taxable income by channeling part of their salary to retirement plans. As provided under section 401(k) of the Internal Revenue Code, income taxes on these employee contributions, as well as on earnings of invested funds, are deferred until moneys are eventually distributed. Consequently, such contributions are referred to as being made with "pre-tax" dollars.

Twenty-six percent of all employees within the scope of the 1985 survey were in plans with 401(k) features. Thirty-seven percent of the white-collar and 14 percent of the blue-collar employees participated. Two-thirds of all participants (white- and blue-collar combined) could elect to make their 401(k) contributions to an existing savings and thrift plan where the employer matched at least part of the employee's contribution; the remaining one-third of the participants were in freestanding 401(k) plans (no employer contribution) (13 percent), profit sharing plans (16 percent), and money purchase pension plans (4 percent).[29]

From a different perspective, 42 percent of all participants in defined contribution plans could make tax-deferred (pre-tax) contributions to their plan. The incidence, again, was higher for white-collar (49 percent) than for blue-collar (30 percent) employees.[30]

Savings and thrift plans

Just over one-fourth of all employees participated in savings and thrift plans, the highest participation rate among the defined contribution plans studied. These plans were much more prevalent among white-collar workers (39 and 33 percent, respectively, for professional and administrative employees and technical and clerical employees), than among blue-collar workers (17 percent). Under these plans, employees contribute a predetermined portion of earnings to an account, all or part of which is matched by the employer. These funds are invested in various ways, such as stocks, bonds, and money market funds as directed by the employee or employer, depending upon the provisions of the plan. Although usually designed as a long-term savings program, savings and thrift plans allow for withdrawals subject to specified conditions and possibly, penalties.

Eighty-six percent of the participants had to meet an age and/or service requirement prior to joining the plan (table 71). Seventy percent were required only to meet a service requirement, most commonly 1 year.

Employee contributions (tables 72–73). Savings and thrift plans allow the employee to choose from a range of possible contribution rates. A typical plan allows employees to contribute (in whole percentages) anywhere from 2 to 16 percent of their income to the plan. One-third of the participants could contribute up to 16 percent of their earnings; 10 percent and 12 percent were other common maximums.

Two-thirds of the participants in savings and thrift plans were allowed to make pre-tax contributions, as permitted by section 401(k) of the Internal Revenue Code. Thirty-six percent were given the option to contribute either pre-tax or post-tax earnings, while 30 percent were required to make contributions on a pre-tax, salary reduction basis. A majority of participants in plans mandating pre-tax contributions, however, were required to contribute only an initial amount pre-tax. For example, a plan may allow a maximum contribution of 16 percent with only the first 6 percent required on a pre-tax basis.

Employer matching contributions (table 74). Employers provide an incentive for participation in a savings and thrift plan by matching all or a portion of the employee contribution and adding this amount to the employee's account. Usually the employer matches a portion of the employee's contribution up to a specified percent. For example, the most common provision found in the 1985 survey was for an employer to match 50 percent of the employee's contribution up to the first 6 percent. Assuming the employee contributed 8 percent of earnings, the employer would add 3 percent (50 percent of the first 6 percent of the employee contribution). In contrast with these straight percentage matches, one-fifth of the participants received matching contribution rates varying by length of service, level of employee contribution, or company profits.

Investment decisions (table 75). Nine-tenths of the participants in savings and thrift plans were allowed to choose how they wanted their own contributions invested. Common investment vehicles offered by these plans included company stock, common stock funds, guaranteed investment contracts, government securities, corporate bonds, and money market funds. The number of choices in these plans varied from two to five or more, with three choices being the most common. Employees were nearly always allowed to split their contributions among the various options offered and were allowed to change their investment choices periodically.

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[29] Estimates in this paragraph differ from the preliminary figures cited in the April 24, 1986, news release, "Retirement Coverage Widespread in Medium and Large Firms, 1985," USDL: 86-166.

[30] The survey determined the number of employees actually contributing to freestanding 401(k) plans. It also determined the number participating in employer-financed plans allowing employee contributions with pre-tax dollars, but not the number of employees actually making such contributions.

Employees generally had less flexibility when it came to employer contributions. Only about one-half of the participants were permitted to choose how the matching contribution was to be invested. Where no choice was permitted, the plan typically specified that the matching contribution was invested in company stock.

Vesting (table 76). Savings and thrift plans are subject to ERISA vesting rules in the same manner as pension plans. However, employers usually design savings and thrift plans with more rapid vesting provisions. One-fourth of all participants were fully vested immediately, and most plans provided for full vesting at retirement, death (for employee's survivors), or disability regardless of age or service. Class year vesting is the most common method among savings and thrift plans. In these plans, contributions for a particular year (class) become nonforfeitable after a specified period of time-usually 2 or 3 years. For example, employer contributions made during 1985 would not vest until 1988. All vesting schedules apply only to the employer's contribution, because employee contributions are always 100 percent vested.

Withdrawals and loans (table 77). Eight-tenths of the participants in savings and thrift plans were allowed to withdraw all or a portion of employer contributions prior to normal payout (retirement, disability, or termination of employment). One-fifth, however, were only allowed to withdraw employer contributions for hardship reasons (medical, educational, home improvements, etc.). Three-fifths of the participants could withdraw for any reason. Half of the participants who could withdraw for any reason were subject to a penalty—usually suspension of employer and employee contributions for 6 or 12 months.

The ability of the participants to withdraw their own contributions prior to retirement, death, disability, age 59 1/2, or termination of employment depends upon whether the money was contributed pre-tax or post-tax. Pre-tax 401(k) contributions are subject to IRS regulations and can only be withdrawn for hardship. Post-tax contributions are not subject to IRS hardship rules, and many plans allow these amounts to be withdrawn for any reason. However, a penalty in the form of a 6- or 12-month suspension from further contributions to the plan is common.

Loan provisions applied to one-sixth of the participants, with one-half eligible for loans from their account for any reason. Customarily, interest rates were set by a specified economic indicator (U.S. Treasury bill, prime rate, etc.) or at the discretion of the plan sponsor.

Distribution (table 78). At retirement, savings and thrift plans virtually always allowed for payout in the form of a lump sum, lifetime annuity, or installments over a specified time period. Many participants were given a choice from among two or all three of these options.

Employee stock ownership plans (ESOPs)

One-fourth of all employees in medium and large firms participated in an ESOP.[31] These plans, funded entirely by the employer, provide employees with stock in their company. The employer pays a designated amount to a fund which is invested primarily in company stock and makes benefit distributions in either company stock or cash. The vast majority of participants in ESOPs were in payroll-based plans (PAYSOPs). Companies receive a tax credit of up to 0.5 percent of the plan participants' payroll, for funds used to purchase company stock to distribute to the participants' accounts. Current law allows for these tax credits through 1987.

Profit sharing plans

Eighteen percent of all employees had profit sharing plans in 1985. There are three types of profit sharing plans—cash plans (covering 1 percent of the workers), deferred plans (14 percent), and plans that offer a combination of cash and deferred benefits (3 percent). In a cash plan, benefits are paid directly to the participants in cash, usually at the end of the year, while a deferred plan holds money in employee accounts until retirement or another condition stipulated by the plan (disability, death, etc.). In a combined plan, the employee usually has an option to take a portion of the profits in cash and put the rest into a deferred account. Twenty-two percent of participants in profit sharing plans could make voluntary pre-tax 401(k) contributions to the plan.

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[31] This proportion is limited to plans where stock was credited to employee accounts during 1985.

Table 67. Retirement and capital accumulation plan coverage: Percent of full-time employees by participation in retirement plans and capital accumulation plans, medium and large firms, 1985

Type of plan	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
Covered by retirement or capital accumulation plan	92	94	94	90
Retirement[1] only	71	65	68	77
Capital accumulation[2] only	1	1	(3)	(3)
Retirement and capital accumulation	20	28	25	13
Not covered by retirement or capital accumulation plan	8	6	6	10

[1] Includes defined benefit pension plans and defined contribution plans such as money purchase pension, profit sharing, savings and thrift, stock bonus, and employee stock ownership plans in which employer contributions must remain in the participant's account until retirement age, death, disability, separation from service, age 59 1/2, or hardship.

[2] Includes plans in which employer contributions may be withdrawn from participant's account prior to retirement age, death, disability, separation from service, age 59 1/2, or hardship. Excludes pure cash profit sharing, stock option, and stock purchase plans.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 68. Defined contribution and stock plans: Percent of full-time employees participating by type of plan, medium and large firms, 1985

Type of plan	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Money purchase pension	4	5	5	2
Savings and thrift	27	39	33	17
Profit sharing[1]	18	19	22	18
Immediate cash only	1	2	2	1
Deferred benefits only	14	15	17	13
Combination	3	3	5	3
Employee stock ownership	24	29	28	19
Payroll based employee stock ownership	22	27	26	18
Other	2	2	3	1
Stock bonus	1	1	1	(2)
Stock option and stock purchase	3	3	3	2

[1] The total may be less than the sum of the individual items because some employees participate in more than one type of profit sharing plan.

[2] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 69. Retirement and capital accumulation plans: Percent of full-time participants by combinations of plans, medium and large firms, 1985

Type of plan	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Defined benefit or money purchase pension	89	90	91	88
With:				
No other plan	45	33	35	57
Profit sharing[1]	5	6	9	2
Savings and thrift	15	22	19	9
Stock[2]	9	10	11	8
Profit sharing[1] and savings	(3)	1	1	(3)
Profit sharing[1] and stock[2]	4	3	4	4
Savings and stock[2]	11	15	12	8
Two or more stock[2] plans	(3)	(3)	(3)	
Other combinations	1	1	1	(3)
Profit sharing[1]	9	6	7	11
With:				
No other plan	7	5	5	9
Savings and thrift	1	1	1	1
Stock[2]	1	1	1	1
Savings and stock[2]	(3)	(3)	(3)	(3)
Two or more stock[2] plans	(3)	1	1	(3)
Savings and thrift	1	2	1	(3)
With:				
No other plan	1	2	1	(3)
Stock[2]	(3)	(3)	(3)	(3)
Stock[2] plan	(3)	1	1	(3)
With:				
No other plan	(3)	1	1	(3)

[1] Excludes pure cash profit sharing plans.

[2] Employee Stock Ownership Plans (ESOPs), including Payroll Based Employee Stock Ownership Plans (PAYSOPs), and stock bonus plans.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 70. Salary reduction plans: Percent of full-time employees participating in plans permitting employee contributions with pre-tax dollars – section 401(k) plans, medium and large firms, 1985

Item	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Percent of all employees in plans with 401(k) features	26	40	34	14
Type of 401(k) Plan				
Total	100	100	100	100
Free standing plan[1]	13	12	12	15
401(k) contributions are made to an existing:[2]				
Savings and thrift plan	68	72	63	66
Profit sharing plan	16	12	20	17
Money purchase plan	4	4	4	2

[1] Employer contributions are not made to the plan.

[2] Tabulations show percent of employees participating in plans to which they may make contributions with pre-tax dollars. Not all participants may elect to make such contributions.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 71. Savings and thrift plans: Percent of full-time participants by age and length-of-service requirements for participation, medium and large firms, 1985

Age and service requirement provisions[1]	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
With minimum age and/or service requirement	86	84	87	88
Service requirement only	70	69	70	73
3 months or less	8	9	8	7
6 months	6	8	6	5
1 year	48	46	46	54
2 years	4	3	6	5
25-35 months	(2)	(2)	(2)	-
3 years	2	2	4	2
Age 20 or less	4	4	4	5
No service requirement	(2)	(2)	(2)	-
1-11 months of service	2	2	2	2
1 year	2	2	3	2
Age 21[3]	11	11	13	10
No service requirement	(2)	(2)	(2)	(2)
1-6 months of service	4	4	4	3
1 year	6	6	7	5
Over 1 year	1	1	2	1
Without minimum age and/or service requirement	14	16	13	12

[1] If a plan had alternate participation requirements, one of which was service only, the service only requirement was tabulated.

[2] Less than 0.5 percent.

[3] The Retirement Equity Act of 1984 requires that, for plan years beginning on or after January 1, 1985, nearly all plans must allow participation to full-time employees who have reached age 21 and who have completed one year of service. Plans may impose a service requirement of up to three years if the employee is vested immediately upon participation. Also, collectively bargained plans need not comply until the earlier of: 1) The expiration date of the collective bargaining agreement, or 2) January 1, 1987.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 72. Savings and thrift plans: Percent of full-time participants by maximum allowable employee contribution,[1] medium and large firms, 1985

Maximum allowable contribution[2]	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Percent of employee earnings:				
Less than 5 percent	(3)	(3)	(3)	(3)
5 percent	(3)	(3)	(3)	1
6 percent	3	3	2	5
7-9 percent	2	2	2	2
10 percent	17	15	17	20
11 percent	3	3	4	1
12 percent	12	13	14	8
13-14 percent	6	5	6	6
15 percent	8	11	9	3
16 percent	32	30	31	37
17-19 percent	8	9	6	8
20 percent or greater	6	7	8	3
Specified dollar amount	2	(3)	1	5

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[1] Includes contributions which may not be matched by the employer.

[2] If maximum varied by participant's length of service, age, or both, the highest possible percentage was tabulated.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 73. Savings and thrift plans: Percent of full-time participants by provisions for pre-tax employee contributions,[1] medium and large firms, 1985

Item[2]	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Pre-tax contributions allowed	65	73	65	56
All contributions must be pre-tax	13	14	14	10
Maximum contribution is:				
5 percent	(3)	-	(3)	1
6 percent	1	1	1	(3)
8 or 9 percent	(3)	(3)	(3)	(3)
10 percent	3	3	3	3
11 percent	1	1	1	1
12 percent	3	4	2	2
15 percent	2	3	2	1
16 percent	1	2	1	(3)
Greater than 16 percent	1	1	2	(3)
Specified dollar amount	1	-	1	2
Initial contributions must be pre-tax[4]	17	18	18	14
Maximum pre-tax contribution is:				
4 percent	1	1	1	-
5 percent	1	1	1	1
6 percent	4	4	3	4
7 percent	(3)	(3)	1	-
8 or 9 percent	1	1	2	(3)
10 percent	4	4	4	5
12 percent	1	1	1	(3)
12.01 - 14.99 percent	2	2	1	2
15 percent	2	2	2	2
16 percent	1	1	2	1
Greater than 16 percent	(3)	(3)	-	-
Contributions may be pre-tax at the employee's option[5]	36	41	33	32
Maximum pre-tax contribution is:				
Less than 5 percent	(3)	(3)	(3)	-
5 percent	1	2	1	(3)
6 percent	6	5	6	8
7 percent	3	3	2	5
8 percent	3	6	3	1
9 percent	(3)	(3)	(3)	(3)
10 percent	4	4	4	4
12 percent	3	4	3	(3)
13 percent	1	1	1	2
14 percent	1	1	1	(3)
15 percent	2	3	2	(3)
16 percent	8	8	6	11
18 percent	1	2	1	-
Specified dollar amount	2	2	2	1
Pre-tax contributions not allowed	35	27	35	44

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[1] Pre-tax contributions are allowed under section 401(k) of the Internal Revenue Code.

[2] If maximum varied by participant's length-of-service, age, or both, the highest possible percentage was tabulated.

[3] Less than 0.5 percent.

[4] Contributions above the maximum pre-tax level are allowed on a post-tax basis.

[5] In most plans, all contributions may be either pre-tax or post-tax at the employee's option. In some, however, an initial contribution must be on a pre-tax basis, with a choice between pre-tax and post-tax contributions for higher amounts. In these cases, the largest percentage available for pre-tax contributions has been tabulated.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 74. Savings and thrift plans: Percent of full-time participants by provision for employer matching contributions, medium and large firms, 1985

Employee earnings to be matched[1]	Total	Matching percentage[2]					
		25 percent	50 percent	75 percent	100 percent	Other fixed percentages	Varies[3]
All participants							
Total	100	3	53	6	9	10	19
Up to the first:							
2 percent	1	-	(4)	-	(4)	-	1
3 percent	6	1	1	-	2	-	2
4 percent	5	1	3	(4)	1	-	(4)
5 percent	14	(4)	5	1	2	2	4
6 percent	52	2	27	1	3	7	11
7 percent	5	-	3	1	-	1	-
8 percent	5	-	3	1	(4)	-	1
9 percent	(4)	-	-	-	-	(4)	-
10 percent	3	(4)	2	(4)	-	(4)	(4)
Greater than 10 percent	1	-	-	-	1	-	-
Specified dollar amount	9	-	8	(4)	(4)	-	(4)
Professional and administrative							
Total	100	3	45	8	11	16	16
Up to the first:							
2 percent	(4)	-	(4)	-	(4)	-	-
3 percent	4	(4)	1	-	2	-	1
4 percent	4	(4)	2	(4)	1	-	1
5 percent	17	(4)	6	1	3	3	4
6 percent	54	2	27	1	4	12	9
7 percent	6	-	3	3	-	1	-
8 percent	9	-	5	3	(4)	-	1
9 percent	(4)	-	-	-	-	(4)	-
10 percent	3	(4)	1	1	-	(4)	(4)
Greater than 10 percent	1	-	-	-	1	-	-
Specified dollar amount	1	-	-	-	(4)	-	(4)
Technical and clerical							
Total	100	3	56	5	12	8	15
Up to the first:							
2 percent	2	-	1	-	1	-	-
3 percent	5	(4)	(4)	-	3	-	2
4 percent	6	1	3	(4)	1	-	(4)
5 percent	13	(4)	5	1	2	2	3
6 percent	52	2	31	1	4	4	9
7 percent	4	-	2	2	-	1	-
8 percent	4	-	2	1	(4)	-	(4)
9 percent	1	-	-	-	-	1	-
10 percent	3	(4)	2	(4)	-	(4)	(4)
Greater than 10 percent	1	-	-	-	1	-	-
Specified dollar amount	10	-	10	(4)	(4)	-	(4)
Production							
Total	100	5	59	2	3	6	24
Up to the first:							
2 percent	2	-	(4)	-	-	-	2
3 percent	8	2	3	-	1	-	2
4 percent	4	1	3	-	(4)	-	(4)
5 percent	10	(4)	5	(4)	(4)	1	5
6 percent	48	2	23	1	2	5	14
7 percent	5	-	5	-	-	(4)	-
8 percent	2	-	1	-	(4)	-	1
9 percent	(4)	-	-	-	-	(4)	-
10 percent	3	-	3	(4)	-	-	-
Greater than 10 percent	(4)	-	-	-	(4)	-	-
Specified dollar amount	18	-	17	1	-	-	-

[1] Employee may contribute a percent of salary up to a specified maximum (see table 72); ceilings on contributions to be matched by employers generally are lower. If the maximum varied by participant's length-of-service, age, or both, the highest possible percentage was tabulated.

[2] The percentage of matchable employee contributions added by employers. Some plans specified a maximum annual employer contribution.

[3] Includes percentages which vary by length of service, level of employee contribution, and company profits.

[4] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 75. Savings and thrift plans: Percent of full-time participants by provisions for investment of employer and employee contributions, medium and large firms, 1985

Characteristic	All participants		Professional and administrative participants		Technical and clerical participants		Production participants	
	Employer contributions	Employee contributions	Employer contributions	Employee contributions	Employer contributions	Employee contributions	Employer contributions	Employee contributions
Total in plans permitting investment choices by employees[1]	48	90	56	92	45	91	39	85
Investment choices								
Total	100	100	100	100	100	100	100	100
Company stock	61	70	64	70	50	65	66	74
Common stock fund	85	74	84	82	87	74	84	65
Corporate bonds	34	30	26	29	38	32	45	30
Diversified mix of stocks and bonds	13	13	13	16	13	13	11	10
Government securities	42	35	47	41	35	28	39	32
Guaranteed investment contracts	64	71	73	72	62	71	52	69
Money market funds	23	21	22	25	26	22	22	15
Other[2]	4	7	3	6	7	5	4	10
Investment choices not determinable	1	(3)	(3)	(3)	2	1	(3)	(3)
Number of choices								
Total	100	100	100	100	100	100	100	100
Two	20	26	17	16	21	29	26	37
Three	44	39	43	41	48	40	41	36
Four	24	26	30	34	18	22	17	20
Five or more	12	9	9	9	11	9	15	8
Investment choices not determinable	1	(3)	(3)	(3)	2	1	(3)	(3)

[1] Excludes plans which limit investment options to participants age 55 or greater.

[2] Includes purchases of life insurance or annuities, real estate, mortgages, and deposits in credit union or savings accounts.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 76. Savings and thrift plans: Percent of full-time participants by type of vesting schedule, medium and large firms, 1985

Type of vesting schedule	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total[1]	100	100	100	100
Immediate full vesting	25	23	27	26
Cliff vesting,[2] with full vesting after:	12	12	12	13
1-2 years	3	3	3	4
3-4 years	2	3	2	(3)
5 years	4	2	2	6
More than 5 years	3	3	5	2
Graduated vesting,[4] with full vesting after:	28	28	30	24
4 or fewer years	4	6	4	1
5 years	16	18	18	11
6-9 years	4	2	3	8
10 years	3	2	5	1
More than 10 years	1	1	(3)	2
Class vesting,[5] with each class fully vested after:	37	39	34	38
1 year	3	2	2	4
2 years	20	18	20	23
3 years	10	14	8	6
More than 3 years	5	4	4	6

[1] Because plans may adopt alternative vesting schedules, sums of participants covered by individual vesting schedules may exceed 100 percent.

[2] Under a cliff vesting schedule, an employee is not entitled to any benefits accrued under the plan until satisfying the requirements for 100 percent vesting.

[3] Less than 0.5 percent.

[4] Graduated vesting schedules give an employee rights to a gradually increasing share of accrued benefits, determined by years of service and eventually reaching 100 percent vesting status.

[5] Under class year vesting, employers' contributions for a particular year (class) become nonforfeitable after satisfying vesting requirements. Subsequent years become fully vested as each class matures. Included here are class year schedules with both graduated and cliff vesting features.

Table 77. Savings and thrift plans: Percent of full-time participants by provisions for withdrawal of employer contributions prior to disability, retirement, or termination of employment, medium and large firms, 1985

Least restrictive provision	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
With withdrawal provisions	80	82	81	78
For hardship reasons[1]	19	19	22	17
Full withdrawal, no penalty	13	12	16	10
Full withdrawal, with penalty	3	3	2	4
Partial withdrawal, no penalty	1	1	1	-
Partial withdrawal, with penalty	(2)	(2)	1	-
Not determinable	3	2	2	3
For any reason	61	63	59	61
Full withdrawal, no penalty	29	28	28	32
Full withdrawal, with penalty	30	32	29	28
Partial withdrawal, no penalty	1	1	1	-
Not determinable	1	1	2	(2)
Without withdrawal provisions	20	18	19	22

[1] Commonly expressed reasons for withdrawal were: purchase or repair of primary residence; education of an immediate family member; death or illness in the family; or sudden uninsured loss.

[2] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals. Dash indicates no employees in this category.

Table 78. Savings and thrift plans: Percent of full-time participants by method of distribution of account at retirement, medium and large firms, 1985

Methods of distribution available	All participants	Professional and administrative participants	Technical and clerical participants	Production participants
Total	100	100	100	100
Cash distribution[1]	99	99	99	100
Lifetime annuity (including joint-and-survivor forms)	29	28	30	30
Installments	59	58	58	61
Lump sum	99	99	99	100
Stock distribution only[2]	1	1	1	(3)
Not determinable	(3)	(3)	(3)	(3)

[1] The total is less than the sum of the individual items because many participants are offered optional forms of cash distribution.

[2] Employer and employee contributions are invested solely in company stock, which is automatically distributed upon retirement or termination of employment. Stock may also be distributed under plans providing for cash distributions.

[3] Less than 0.5 percent.

NOTE: Because of rounding, sums of individual items may not equal totals.

Chapter 7. Other Benefits

In addition to the major benefits discussed in previous chapters, information was collected on a number of other benefit plans, such as subsidized meals, nonproduction bonuses, and recreation facilities. The data on these benefits show the percent of workers eligible for a specific benefit, but do not indicate the proportion of employees actually taking advantage of such benefits. Generally, benefits were provided to all or none of the workers in an employee group (professional and administrative, technical and clerical, or production workers) within an establishment (table 79).

Automobile parking (provided at no cost or below commercial rates) and full or partial payment of educational expenses were available to at least three-fourths of the employees. Travel accident insurance and employee discounts on purchases of the employer's goods or services covered half of the employees of each group. Among the benefits surveyed, eligibility was lowest for supplemental unemployment benefits, subsidized commuting to and from work, child care, prepaid legal services, and company-sponsored reimbursement accounts for payment of items such as medical expenses not covered by health insurance. Child care (full or partial defrayment of the cost of nursery, day care center, or babysitter for employee's children) was available to only 1 percent of the workers.

Incidence of several benefits differed markedly by employee group, with a larger proportion of professional-administrative employees usually covered. For example, full or partial payment of relocation expenses for transferred or newly hired employees was available to four-fifths of the professional-administrative employees but to only two-fifths of the technical-clerical employees and one-fourth of the production employees. Severance pay was available to three-fifths of the white-collar employees, almost twice the proportion of blue-collar employees covered. Travel accident insurance, financial counseling, subsidized commuting, and company sponsored reimbursement accounts were other benefits almost twice as prevalent among white-collar employees as blue-collar employees. Only supplemental unemployment benefits and prepaid legal services were substantially more common among blue-collar employees than white-collar employees.

For two benefits, the data distinguish between full and partial defrayment of the cost of the benefit to the employee. Fully paid relocation allowances, more common among eligible white-collar employees—especially the professional-administrative occupational group, included payments for moving and interim living expenses, and the cost of breaking a lease or selling a house. Employees with partial reimbursement for education expenses outnumbered those with full reimbursement by nearly 5 to 3 for white-collar employees and 2 to 1 for blue-collar workers. Full educational assistance included total cost for books, tuition, and fees, but not necessarily for worktime lost due to attending courses.

Table 79. Other benefits: Percent of full-time employees eligible for specified benefits, medium and large firms, 1985

Benefit	All employees	Professional and administrative employees	Technical and clerical employees	Production employees
Total	100	100	100	100
Income continuation plans:				
Severance pay	45	61	57	31
Supplemental unemployment benefits	8	4	3	13
Transportation benefits:				
Parking	86	82	77	92
Subsidized commuting	5	8	7	3
Travel accident insurance	52	72	63	36
Gifts and cash bonuses:				
Gifts	14	14	14	14
Nonproduction bonuses	20	22	20	19
Financial and legal services:				
Financial counseling	11	13	14	8
Prepaid legal services	3	2	2	5
Miscellaneous benefits:				
Employee discounts	57	54	61	56
In-house infirmary	46	47	38	50
Company sponsored reimbursement account	4	6	5	2
Recreation facilities	33	37	31	32
Subsidized meals	21	28	26	16
Child care	1	2	1	1
Relocation allowance:				
Full defrayment of expenses	30	63	31	12
Partial defrayment of expenses	13	19	10	12
Educational assistance:				
Full defrayment of expenses	27	32	32	22
Partial defrayment of expenses	49	54	52	46

Appendix A: Technical Note

Scope of survey

This survey of the incidence and characteristics of employee benefit plans covers private sector establishments[1] in the United States, excluding Alaska and Hawaii, employing at least 50, 100, or 250 workers, depending on the industry. Industrial coverage includes: Mining; construction; manufacturing; transportation, communications, electric, gas, and sanitary services; wholesale trade; retail trade; finance, insurance, and real estate; and selected services (table A-1).

Establishments meeting the minimum size criteria as of the reference date of the sampling frame are included in the survey, even if they employed fewer workers at the time of data collection. Establishments found to be outside the industrial scope of the survey at the time of data collection are excluded.

Table A-1 shows the estimated number of establishments and employees within the scope of the survey and the number within the sample actually studied for each major industry division.

Occupational groups

Data were collected individually for the following three broad occupational groups:

Professional-administrative: Includes occupations that require a foundation of knowledge in the theories, concepts, principles, and practices of a broad field of science, learning, administration, or management acquired through a college-level education or the equivalent in progressively responsible experience. Above entry levels, the exercise of a high degree of creativity, originality, analytical ability, and independent judgment to solve varied and complex problems in the field of work is characteristic.

Technical-clerical: Includes office and sales clerical, technical support, protective services, and other such occupations that do not require full knowledge of a professional or administrative field of work or the application of a high level of creativity, originality, analytical ability, or independent judgment. Job performance skills are typically acquired through on-the-job experience and/or specific training which is less than that usually represented by a baccalaureate degree. These skills include the application of a practical knowledge of established procedures, practices, precedents, and guidelines.

Production: Includes skilled, semiskilled, and unskilled trades; craft and production occupations; manual labor occupations; custodial occupations; and operatives.

Excluded from the survey are executive employees (defined as those whose decisions have direct and substantial effects on an organization's policymaking); part-time, temporary, and seasonal employees; and operating employees in constant travel status, such as airline flight crews and long-distance truckdrivers.

Benefit areas

Sampled establishments were requested to provide data on work schedules and details of plans in each of the following benefit areas: Paid lunch periods, paid rest periods, paid holidays, paid vacations, paid personal leave, paid funeral leave, paid military leave, paid jury duty leave, paid sick leave, sickness and accident insurance, long-term disability insurance, health insurance, life insurance, and retirement and capital accumulation plans.

Data were also collected on the incidence of the following additional benefits: Severance pay, supplemental unemployment benefits, employee discounts, noncash bonuses, nonproduction bonuses, relocation allowances, recreation facilities, subsidized meals, educational assistance, automobile parking, subsidized commuting, travel accident insurance, financial counseling, prepaid legal services, company sponsored reimbursement accounts, child care, and in-house infirmaries.

Sampling frame

The scope of this survey was the same as that of the Bureau's 1985 National Survey of Professional, Administrative, Technical, and Clerical Pay (PATC). The list of establishments from which the sample was selected (called the sampling frame) was, therefore, the same as that developed for the 1985 PATC. This sampling frame was developed by refining data from the most recently available State Unemployment Insurance (UI) reports

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[1] For this survey, an establishment is an economic unit which produced goods or services, a central administrative office, or an auxiliary unit providing support services to a company. In manufacturing industries, the establishment is usually a single physical location. In nonmanufacturing industries, all locations of an individual company within a Metropolitan Statistical Area (MSA) or within a nonmetropolitan county are usually considered an establishment.

Table A-1. Estimated number of establishments and workers within scope of survey and number studied, medium and large firms, United States,[1] 1985

Industry division[2]	Minimum employment in establishments within scope of survey	Number of establishments	Number of workers in establishments: Total[3]	Professional and administrative	Technical and clerical	Production
	Within scope of survey[4]					
All industries	-	42,696	23,120,600	5,513,278	4,904,944	10,071,657
Manufacturing	[5] 100-250	17,700	11,644,567	2,721,391	1,654,133	6,943,863
Nonmanufacturing	-	24,994	11,476,032	2,791,887	3,250,811	3,127,794
Mining	250	557	475,911	102,819	54,436	315,776
Construction	250	587	258,545	73,116	57,841	73,628
Transportation, communications, electric, gas, and sanitary services	[6] 100-250	4,395	2,665,526	616,592	661,124	1,098,026
Wholesale trade	100	5,023	995,683	282,408	249,697	380,524
Retail trade	250	4,151	3,607,601	405,833	575,799	1,085,766
Finance, insurance, and real estate	100	6,861	2,594,474	847,044	1,375,302	129,937
Selected services[7]	[8] 50-100	3,419	878,292	463,075	276,611	44,137
	Studied[9]					
All industries	-	1,325	4,283,802	1,189,825	952,324	1,820,688
Manufacturing	[5] 100-250	625	2,488,897	726,487	388,526	1,344,267
Nonmanufacturing	-	700	1,794,905	463,338	563,798	476,421
Mining	250	18	37,310	16,240	9,609	10,780
Construction	250	27	41,752	18,535	11,549	6,434
Transportation, communications, electric, gas, and sanitary services	[6] 100-250	162	881,672	211,535	228,817	339,747
Wholesale trade	100	91	36,633	13,389	11,167	10,461
Retail trade	250	142	365,160	38,218	78,157	95,127
Finance, insurance, and real estate	100	187	346,163	118,540	200,245	5,406
Selected services[7]	[8] 50-100	73	86,215	46,881	24,254	8,466

[1] Excludes Alaska and Hawaii.

[2] As defined in the 1972 edition of the Standard Industrial Classification Manual, U.S. Office of Management and Budget. Industry data are shown for informational purposes only and are subject to larger than normal sample error. See section on reliability of estimates.

[3] This figure includes out-of-scope workers. These workers—executive management, part time, temporary, seasonal, and operating personnel in constant travel status (e.g., airline pilots)—are excluded from the counts of employment by occupational group.

[4] Number of establishments and workers shown within the scope of the survey are estimates. These estimates differ from those developed in the 1985 PATC survey, since each is based on the findings of its respective survey.

[5] Minimum employment size was 100 for chemical and allied products; petroleum refining and related industries; machinery, except electrical; electrical machinery, equipment, and supplies; transportation equipment; and instruments and related products. Minimum size was 250 in all other manufacturing industries.

[6] Minimum employment size was 100 for railroad transportation; local and suburban transit; deep sea foreign and domestic transportation; air transportation; communications; electric, gas, and sanitary services; and pipelines; and 250 for all other transportation industries. U.S. Postal Service is excluded from the survey.

[7] Limited to advertising; credit reporting and collection agencies; computer and data processing services; research and development laboratories; commercial testing laboratories; management and public relations services; engineering and architectural services; noncommercial research organizations; and accounting, auditing, and bookkeeping services.

[8] Minimum employment size was 50 for accounting, auditing, and bookkeeping services; and 100 in all other selected services.

[9] These figures refer to all respondents to the survey, whether or not they provided data for all items studied. See the section on survey response.

for the 48 States covered by the survey and the District of Columbia. The reference date of the available UI reports was generally March 1983. The refinement procedures included an effort to ensure that most sampling frame units corresponded to the definition of an establishment developed for this survey. (A small number of sampling frame units were not refined to correspond to the definition of an establishment because of limited company reporting ability.)

Sample design

The sample for this survey was a subsample of the 1985 PATC sample to reduce the costs and resources required for data collection. The sample of 1,509 establishments[2] was selected by first stratifying the sampling frame by broad industry group and establishment size group based on the total employment in the establishment. The industry groups consisted of the eight major industry divisions, as defined by the Office of Management and Budget, which are covered by the survey and shown in table A-1.

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[2] The number of sample units selected in this survey is, at present, largely determined by resources and operational constraints and may be adjusted up or down in future surveys.

The establishment size groups are defined as follows:

Employment size group	*Establishment employment*
3	50-99
4	100-249
5	250-499
6	500-999
7	1,000-2,499
8	2,500-4,999
9	5,000-9,999
10	10,000 and over

The sample size was allocated to each stratum (defined by industry and size) approximately proportional to the total employment of all sampling frame establishments in the stratum. Thus, a stratum which contained 1 percent of the total employment within the scope of the survey received approximately 1 percent of the total sample. The result of this allocation procedure is that each stratum will have a sampling fraction (the ratio of the number of units in the sample to the number in the sampling frame) which is proportionate to the average measure of size of the units in the stratum.

A random sample was selected within each stratum using a probability technique to maximize the probability of retaining establishments which were selected in the 1984 survey.[1] This method of selection reduced collection costs by decreasing the number of new establishments in the sample.

Data collection

Data for the survey were collected by visits of Bureau field representatives to the sampled establishments. To reduce the reporting burden, respondents provided documents to BLS describing their retirement and capital accumulation plans and plans covering the four insured benefit areas within the scope of the survey. These documents included employee handbooks, brochures, insurance policies, and summary plan descriptions that employers are required to provide to employees under ERISA. These were analyzed by BLS staff in Washington to obtain the required data on plan provisions. Data on paid leave and other benefits generally were obtained directly from the employers at the time of the visit.

Data were collected during the months of January through July, reflecting an average reference period of March 1985. Respondents were asked for information as of the time of the data collection visit.

Data tabulation

The tables presented in this bulletin show the percent of employees who were covered by paid leave plans, participated in insurance, retirement, or capital accumulation plans, or were eligible for other benefits. Except in table 79, counts of workers covered by benefit plans included those who had not met possible minimum length-of-service requirements at the time of the survey. Workers were counted as participants in employee benefit plans that require the employee to pay part of the cost only if they elected the plan and paid their share. Plans for which the employee paid the full premium were outside the scope of the survey, even if the employer paid administrative costs. When tabulating the effect of retirement on life insurance and health insurance coverage, however, cases where the retiree must pay the full cost of the insurance were counted since the guarantee of insurability at group rates is considered a benefit.

Most of the tables in this bulletin show the percent of workers covered by individual benefit plans or plan provisions. Percentages are calculated in three ways. One technique, followed in tables 1-4, 6, 8, 10-16, and 67-68, shows the number of covered workers as a percent of all workers within the scope of the survey. It is designed to show the incidence of the individual employee benefit.

A second approach is followed in tables 7, 9, 20-27, 39-40, 42-44, 47-49, 54-55, 57-58, 61, 63-66, 69-74, and 76-78. These tables show the number of workers covered by specific features in a benefit area as a percent of all employees who participate in that general benefit area. They also answer questions concerning the typical coverage provided to persons with a given insurance, retirement, or capital accumulation plan; for example, what percent of all employees with health insurance receive dental coverage?

The third approach provides a close look at an important feature (tables 21, 28-38, 41, 45-46, 50-53, and 59); for example, what percent of all employees with dental coverage in their health insurance are covered for orthodontic work? Tables 60, 62, 70, and 75 combine the second and third types above, indicating in the first row of data the percent of persons in the benefit area who have a particular coverage, while the remainder of the table is based on all employees with that coverage. Table 19 uses a similar approach.

This multilevel approach has the advantage of clearly pointing out typical benefit plan characteristics after the prevalence of the benefit has been established. Any of the second or third types of tables, if desired, can be converted to the first type by multiplying each data cell by the appropriate factors. For example, to calculate the percent of all employees with orthodontic coverage, multiply the percent of those with dental plans that cover orthodontia (table 33) by the percent of health insurance participants with dental coverage (table 26), and multiply that product by the percent of all employees who have health insurance coverage (table 1).

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[1] This method modifies the method introduced by Nathan Keyfitz in "Sampling with Probabilities Proportional to Size: Adjusting for Changes in the Probabilities," *Journal of the American Statistical Association*, March 1951, pp. 105-9.

Tables 5, 17–18, and 56 differ from other tables because they display average benefit values rather than percentages of workers. These tables present the averages for all covered employees; calculations exclude workers without the benefit.

Survey response

Each combination of occupational group and work schedule or benefit area (e.g., health insurance for production employees) was treated as an individual survey and separate estimates were developed for each. This treatment facilitated the use of partially completed establishment reports in the survey. Therefore, the actual number of responses for the survey varies for each combination.

The following summary is a composite picture of the establishment responses to the survey:

Number of establishments:

In sample	1,509
Out of business and out of scope	43
Refusing to respond	123
Nonresponse other refusal	18
Responding fully than partially	1,325

There are two procedures used to adjust for missing data from partial schedules and total refusals. First, imputations for the number of plan participants are made for cases where this number is not reported (6 percent of all participants in the 1985 survey). Each of these values is imputed by randomly selecting a similar plan from another establishment in a similar industry and geographic region. The participation rate from the randomly selected plan is then used to approximate the number of participants for the plan which is missing a participation value but was otherwise usable.

For other forms of missing data (or nonresponse), an adjustment is made using a weight adjustment technique based on sample unit employment. Under such a technique, a model is assumed in which the mean value of the nonrespondents is equal to the mean value of the respondents at some detailed "cell" level. These cells are defined in a manner that groups establishments together which are homogeneous with respect to the characteristics of interest. In most cases, these cells are the same as those used for sample selection. The specific weight adjustments used in this survey were calculated in four stages for each occupational group and benefit area combination. This allowed a maximum amount of data from partially completed establishment reports to be incorporated into survey estimates. For example, data on the number of an occupational group's employees in an establishment or participants in a plan, or information on the existence of a plan, could be used even if the plan provisions could not be obtained.

Survey estimation methods

The survey design uses an unbiased estimator, the Horvitz-Thompson, which assigns the inverse of each sample unit's probability of selection as a weight to the unit's data. The estimator is modified to account for a weight adjustment factor developed during the adjustment for nonresponse. The general form of the estimator for a population total is:

$$Y = \sum_{i=1}^{n} \frac{Y_i}{P_i}$$

where n = sample size

Y_i = value for the characteristics of the i^{th} unit

P_i = the probability of including the i^{th} unit in the sample

The basic form of the estimator, after modification to account for the weight adjustment factor, f_i, developed during the adjustment for nonresponse, was:

$$Y = \sum_{i=1}^{n_1} \frac{f_i Y_i}{P_i}$$

where n_1 = number of responding units

f_i = weight adjustment factor for the i^{th} unit.

Appropriate employment or establishment totals are used to calculate the proportion, mean, or percentage which is desired.

Reliability of estimates

The statistics in this bulletin are estimates derived from a sample of 1,500 establishments, rather than tabulations based on all 43,000 medium and large establishments within scope of the survey. Consequently, the data are subject to sampling errors, as well as nonsampling errors.

Sampling errors are the differences that can arise between results derived from a sample and those computed from observations of all units in the population being studied. When probability techniques are used to select a sample, as in the Employee Benefits Survey, statistical measures called "standard errors" can be calculated to measure possible sampling errors.

This evaluation of survey results involves the formation of confidence intervals that can be interpreted in the following manner: Assume that repeated random samples of the same size are drawn from a given population and an estimate of some value, such as a mean or percentage, is made from each sample. Then, the intervals described by one standard error below each sample's estimate and one standard error above would include the population's value for 68 percent of the samples. Confidence rises to 90 percent if the intervals surrounding the sample estimates are widened to plus and minus 1.6 standard errors, and to 95 percent if the intervals are increased to plus and minus 2 standard errors.

Chart A provides standard errors for use in evaluating the estimates in the 75 tables of this bulletin containing percentage estimates. For example, table 1 reports that 67 percent of all employees participated in sick leave plans in 1985. Chart A shows a standard error of approximately 1.6 percent for this estimate. Thus, at the 95 percent level, the confidence interval for this estimate is 64 percent to 70 percent (67 plus and minus 2 times 1.6 percent). Standard errors for the four bulletin tables not containing percentages–5, 17, 18, and 56–are not yet available.

Nonsampling errors also affect survey results. They can be attributed to many sources: Inability to obtain information about all establishments in the sample; definitional difficulties; differences in the interpretation of questions; inability or unwillingness of respondents to provide correct information; mistakes in recording or coding the data; and other errors of collection, response, processing, coverage, and estimation for missing data. Through the use of computer edits of the data and professional review of both individual and summarized data, efforts are made to reduce the nonsampling errors in recording, coding, and processing the data. However, to the extent that the characteristics of nonrespondents are not the same as those of respondents, nonsampling errors are introduced in the development of estimates. Because the impact of these limitations on the Employee Benefits Survey estimates is unknown, reliability measurements are incomplete.

For those readers interested in further mathematical details, the next section describes how chart A was derived from 1982 survey data.

Mathematical details on estimates and generalized standard errors chart

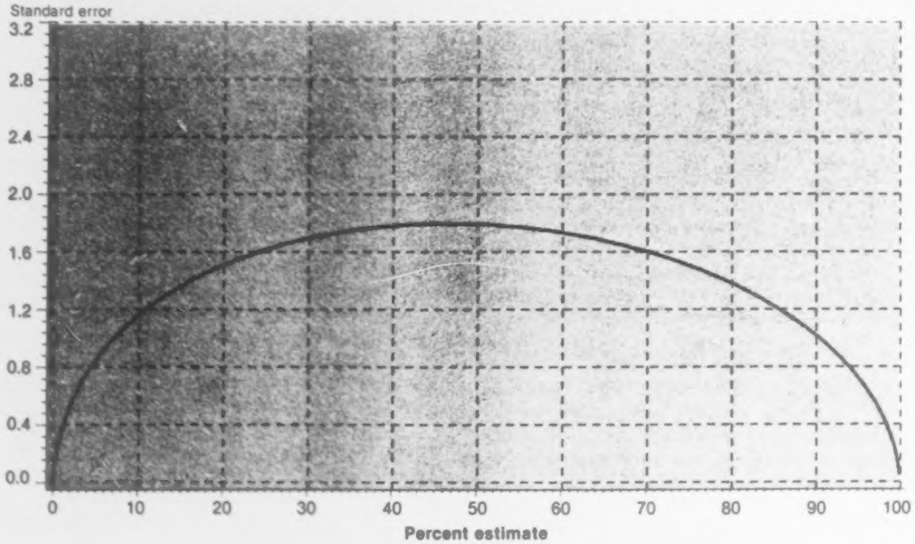
Each estimator used in the production of the tables in this bulletin is approximately normally distributed.

Standard errors for the percentage estimates were computed from the 1982 survey data. To simplify their presentation, a curve was fitted to the standard error estimates by regression techniques.

The curve's equation is:

$$S = e^{[a + b \{\ln(P)\}^2 + c \{\ln(100-P)\}^2 + d \ln(P) \ln(100-P)]}$$

Chart A. Employee benefits survey generalized standard errors



where

S = standard error
P = percentage estimate from the bulletin, and e and ln are notations for the exponential and natural logarithm function.

For the 1982 Employee Benefits Survey, $a = -0.64683$, $b = -0.02603$, $c = -0.017458$ and $d = 0.123726$.

These are regression coefficients. The curve fits the data with $R^2 = 0.85$ and no pattern in the residuals. Moreover, differences between curves using 1982 and 1983 data are negligible.

The equation of the curve was obtained empirically, by using regression methods, and starting with the equation:

$$S = a P^b (100 - P)^c$$

More information describing survey response and reliability may be obtained from the Office of Wages and Industrial Relations, Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC 20212.

Appendix B: Availability of the Survey's Data Base

The tables published in this bulletin present the major findings of the Employee Benefits Survey; results of additional research appear in the *Monthly Labor Review*. However, these cover only a portion of the employee benefits information collected. Persons interested in all provisions of a particular benefit studied during the annual survey can purchase a set of magnetic tapes containing the survey's data base through the Office of Wages and Industrial Relations, Bureau of Labor Statistics, Washington, D. C. 20212. The charge for furnishing the data is limited to the cost of producing the tapes and preparing supporting documentation.

For major benefit items, the BLS survey obtained plan provisions and employee participation data for each of three employee groups (professional-administrative, technical-clerical, and production workers). Information on employer costs was not collected. The magnetic tapes, which consist of a control file and plan data files for each benefit area, may be used to derive national estimates, similar to those published in this bulletin, for other items on the data base. For some data items not presented in this bulletin, however, the datafile is insufficient to produce reliable national estimates, because either information on the provisions frequently was not available or the number of employees with the provision was very small. Moreover, the tapes cannot yield reliable estimates for individual industries, geographic regions, or establishment size classes. Full documentation accompanies the tapes, including examples of estimating formulas. Although Bureau staff will respond to any questions concerning the content of the tapes, technical assistance in developing estimates cannot be provided to purchasers due to the heavy workload associated with the survey program.

Data users can purchase tapes with details of plans for one benefit area or all, i.e., health, life, sickness and accident, and long-term disability insurance; private retirement and capital accumulation plans; and paid time-off provisions—lunch time, rest periods, holidays, personal leave, vacations, funeral leave, jury duty leave, military leave, and sick leave. (Table 79 presents all of the information that was collected on the other benefits surveyed.) The plan data file contains provisions for each plan which was reported and for which usable information was available. However, plan identification numbers on the tape are scrambled (and other identifying information is removed) to protect the confidentiality of responding establishments.

Purchasers also receive the control file, which contains establishment information required to produce estimates from the plan data. Control file records include establishment sample weights and size codes; geographic, industrial, and employee group classification codes; and the number of workers in the employee group. The control file also lists all benefit plans offered in each establishment, with the number of plan participants in each employee group. A plan is listed on more than one control file record if it covers employees in more than one establishment. Although plan identification numbers on the control file are scrambled, the same scrambled numbers appear on the data file so they can be matched to make estimates. Because establishment schedule numbers on the control file are scrambled differently for each employee group, it will not be possible to link together plans offered to different employee groups within an establishment.

Benefit provisions obtained from plan documents are recorded in coding manuals for insurance, retirement, and capital accumulation plans, and are then entered on the plan data file. A set of coding manuals and instructions for completing them are supplied to tape purchasers for interpretation of data on the file. Paid time-off provisions are reported on collection forms which are also provided to tape purchasers.

The analysis of insurance, retirement, and capital accumulation plans is extremely detailed. The following list of health insurance plan provisions included in the data base gives an indication of the breadth and depth of the information available on the magnetic tapes. Other insurance and pension analysis is similarly detailed.

Health insurance data base

- Plan participation requirements
  - When plan participation begins
  - Waiting period by type of benefit
  - Maximum age for participation

- Employee contribution for employee and family benefits-percent paid or monthly contribution

Section A

- Funding media for major categories of health care
  - Hospital benefits
  - Surgical benefits
  - Medical benefits

  - Major medical benefits
  - Dental benefits

- Administrative details
  - Pre-existing condition
  - Minimum age of dependent children
  - Waiting period in case of infant illness
  - Maximum age of dependent children
  - Retiree eligibility
  - Effect of retirement on coverage or contributions
  - Disabled employees' benefit coverage
  - Survivors' benefit coverage

Section B

- Hospital and extended care coverage
  - Hospital room and board coverage
  - Hospital intensive care
  - Hospital miscellaneous coverage
  - Extended care coverage
  - Extended care in licensed extended care facility
  - Basis of extended care coverage
  - Extended care by home health care

- Surgical and medical benefits
  - Surgical care coverage
  - Surgical schedule
  - Conversion factor for relative value schedule
  - Selected surgical procedure maximums
  - Maximum for multiple procedure
  - In-hospital medical coverage
  - Medical office coverage

- Maternity care benefit
  - Who is covered
  - Obstetrical schedule
  - Voluntary abortion coverage
  - Miscarriages or therapeutic abortion coverage
  - Maximum for male sterilization
  - Maximum for female sterilization
  - Separate deductibles

- Diagnostic X-ray and laboratory testing (DXL) benefit
  - DXL coverage
  - Limitations on DXL coverage
  - DXL schedule
  - Selected DXL procedure maximums

- Outpatient care and special accident benefit
  - Outpatient care coverage
  - Comparison of inpatient and outpatient coverage
  - Separate limitations
  - Outpatient charges covered under major medical
  - Accidental bodily injury—special benefit

- Prescription drug and private duty nursing coverage
  - Prescription drug
  - Private duty nursing

- Mental health care benefits
  - Mental health care coverage
  - Hospital confinements due to mental disorders
  - Hospital confinements due to mental disorders covered the same as other illnesses
  - Selected coverages for mental health care
  - Coverage in special hospital

- Dental care benefits
  - Dental care coverage
  - Coverage of employees
  - Coverage of spouses
  - Coverage of dependent children
  - Prophylaxis and routine exams
  - Fillings
  - Surgery—dental
  - Inlays
  - Crowns
  - Periodontal care
  - X-rays
  - Orthodontia
  - Incentive schedule
  - Deductible
  - Maximum coverage
  - Copayment

- Vision care benefits
  - Vision care coverage
  - Eyeglasses
  - Schedule for eyeglasses
  - Eye exams
  - Contact lenses
  - Orthoptics

- Other medical benefits
  - Second surgical opinion
  - Alcoholism treatment
  - Drug abuse treatment
  - Hearing care
  - Hospice care
  - Physical examinations

- Cost containment features

Section C

- Deductible, coinsurance, and/or maximum benefit provisions
  - Covered expenses
  - Deductible expenses
  - Coinsurance by the amount of incurred expenses
  - Coinsurance by the number of days/visits
  - Maximum dollar per day/visit by number of days/visits
  - Maximum number of days/visits for specified expenses
  - Maximum dollar payable for specified covered expenses

Section C questions are designed to identify and describe the benefit provisions of covered expenses in section B that are subject to deductible, coinsurance, and/or maximum benefit provisions. This section consists of 15 sets of 7 questions. One set of questions is completed for each covered expense, or group of covered expenses, with identical deductible, coinsurance, and maximum benefit provisions. In the first question of each set, a group of expenses with common provisions is identified. The remaining 6 questions give the benefit provisions for the group. Additional sets of questions are completed until the benefit provisions of all covered expenses have been described.

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Senator SARBANES. At some point we may want to do a hearing or part of a hearing on that. I'm a little concerned that one of the things that's happening is that while there are a lot of temporary jobs and a lot of special service organizations that provide workers being created, a result is that people do not have a traditional benefit program. They may have a job and they may be working often, according to the study that the JEC has released, but at a lower income job. A lot of the new jobs being created are at the lower end of the income scale, disproportionately so from a past comparison; but in addition, these jobs often don't carry with them the typical benefit package. People aren't covered on insurance. They aren't covered on health care. They aren't covered on vacations. Do we survey vacations as part of the benefit package?

Mr. STELLUTO. Yes, holidays and vacations.

Senator SARBANES. It's interesting that a lot of the European countries by law mandate 3, 4, and even 5 weeks of paid vacation for all workers

Mrs. NORWOOD. Yes.

Senator SARBANES. In other words, if you're a worker in that society, you get a 4- or 5-week paid vacation time. We have nothing like that in this country when we compare the total compensation package.

Mrs. NORWOOD. We do have an industry wage survey of the temporary help industry underway, so we should have some data on what is going on—some more data on what is going on in that area.

Senator MELCHER. Mr. Chairman, I'm assuming that most of the 5.5 million people that are hired, including these two youngsters in their mid-20's of my friend in Montana, working 20 to 30 hours a week, are hired specifically at less than full time, less than 40 hours, so the employer is saved from the responsibility of any portion of the health care insurance and any vacation time. That's his assumption. That's my assumption. Do you have anything or do you try to find out whether that's true?

Mrs. NORWOOD. Well, we hope to have more hard information on that. I know there are lot of assumptions. There may be some quite valid. I just have nothing to add to that. We are doing a survey of the temporary help industry and we hope to have more information on their earnings.

Senator MELCHER. Well, there would be no advantage to a retail outlet, when there are applications for the jobs at more than a ratio of 3 or 4 to 1—there would be absolutely no advantage for the retail outlet to put people on at 20 or 30 hours unless they are going to make some savings.

Mrs. NORWOOD. Well, given the schedules of hours, weekends, evenings, and so on, there may be some use of less than a full workweek for those purposes, but you may be quite right. I just don't have anything on that.

Senator SARBANES. Isn't it a reasonable working hypothesis that most of the people, if not all, on part-time employment probably are not getting any benefit package or very little?

Mrs. NORWOOD. That may be. We just don't have any information on that.

Senator SARBANES. Isn't it the case that a fair number of people employed full-time do not get a benefit package?

Mrs. NORWOOD. Yes. They all get legally required benefits, but the other benefits are different from establishment to establishment.

Senator SARBANES. Hasn't there been a significant increase in the number of people who are working but are working in a temporary classification rather than a permanent classification?

Mrs. NORWOOD. Yes, that's right.

Senator SARBANES. Has there not been a significant increase in the number of those people?

Mrs. NORWOOD. Yes, that's right. That would affect especially pension rights and plans, apart from other fringe benefits.

Senator SARBANES. That's another dimension that we didn't even bring up, but it's also very important.

I guess I have a growing concern that employment opportunities are being shaped in such a way that while people are being counted as working, and therefore, don't show up in the unemployment figures that we review with you here, something very different is happening below the surface.

We have developed a bit this morning what's happening with respect to the part-time employed for economic reasons. If they were factored in we would be talking about a 9.2 percent unemployment rate; and then if we take the discouraged workers and add them in, we're talking about 10.2 percent. But then beyond that—and I gather we are just beginning to explore this area—is the question of whether we are getting a change so that while people are ostensibly working full time, it means less than perhaps in the past because they don't get health insurance, life insurance, vacation, and they don't get a pension. In a sense they're working and we tend to think doing all right, but beneath the surface it really isn't. The whole compensation package is being shrunk radically with respect to those people.

That's something we can perhaps think about pursuing in a very direct way. Commissioner, we want to thank you for, as usual, a very professional presentation. Thank you very much.

Mrs. NORWOOD. Thank you, Senator.

Senator SARBANES. The committee stands adjourned.

[Whereupon, at 11 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, FEBRUARY 6, 1987

Congress of the United States,
Joint Economic Committee,
Washington, DC.

The committee met, pursuant to notice, at 9:40 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senators Sarbanes and Melcher.

Also present: William R. Buechner and Dena Stoner, professional staff members.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator **Sarbanes**. The committee will come to order. Today the Joint Economic Committee continues its monthly hearings on the employment and unemployment situation with the release this morning of the figures for January 1987. We are pleased, of course, to welcome Janet Norwood, the Commissioner of Labor Statistics.

Before turning to the January unemployment figures, I would like to express some concern about the figures on productivity for the fourth quarter of 1986 and for the year as a whole which the BLS released last week.

In the fourth quarter of last year, productivity in the nonfarm business sector fell at an annual rate of 1.7 percent, while manufacturing productivity—which had shown significant improvement in recent months—rose only 0.2 percent. Even if these figures are revised when the revised GNP figures are published, they will still be very low.

For 1986 as a whole, nonfarm productivity rose 0.7 percent, following an increase of only 0.5 percent in 1985. While manufacturing productivity grew at a healthier rate—up 2.7 percent in 1986—it remained below average by the standards of the past 3 years. And, Commissioner, after we finish with the unemployment figures, you may want to just discuss those productivity figures a bit.

Turning to the January unemployment figures, today's news is somewhat more encouraging. The economy apparently created 375,000 jobs in January, after seasonal adjustment. The civilian unemployment rate remained at the 6.7 percent set in December, although the number of people unemployed rose by 75,000. Apparently all of the jobs created in January were in service-producing industries and construction, with no new jobs in manufacturing, and you may want to address that at some point in your presentation.

The committee will now turn to Commissioner Norwood for her analysis of the January figures.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS

Mrs. NORWOOD. Thank you very much, Mr. Chairman. Kenneth Dalton is on my right and Tom Plewes is on my left.

Senator SARBANES. Familiar figures, Commissioner.

Mrs. NORWOOD. Yes. It's always good to have people with you who know the data. We are all very pleased to be here, as always.

In January, both employment and the labor force rose, after adjustment for seasonality. Unemployment, at 6.6 percent overall and 6.7 percent for civilians, was unchanged, sustaining the improvement of December.

As you know, winter weather conditions in construction and other outdoor activities, and the end of holiday shopping in retail trade and services, usually result in employment cutbacks and unemployment increases in January. This year, the employment declines were much less than usual, making the seasonally adjusted data quite positive.

Payroll jobs, as measured by the business survey, were up by 450,000 after seasonal adjustment. Construction activity was more vigorous than usual, in part reflecting favorable weather conditions and the surge of building permits that occurred at the end of last year. After several months of nongrowth, construction employment rose by 140,000 in January.

Employment in manufacturing, which had grown by 80,000 in the last quarter of last year, was unchanged in January. Although small gains occurred in lumber, printing, and chemical manufacturing after seasonal adjustment, small job losses in many other manufacturing industries offset these gains. Nevertheless, weekly factory hours, at 40.9, continued at a high level. As a result, the index of aggregate weekly factory hours rose by 0.5 percent over the month.

As has been the case during most of the current recovery period, a large part of the payroll growth in January was in the service-producing sector. Employment in retail trade grew by 165,000 after seasonal adjustment. Fewer workers had been hired during the holiday selling season, and layoffs in the industry, were, therefore, much smaller than usual. Business and health services continued to push up employment in the services industry, and gains occurred in finance, insurance, and real estate. Over the past year, employment in retail trade has risen more than 600,000, jobs in services were up 1.1 million, and employment in finance, insurance, and real estate grew by nearly 400,000.

Total civilian employment, as measured by the household survey, rose by 375,000 after seasonal adjustment, as the overall employment-population ratio hit 61.1 percent. About 200,000 of this increase was among adult women; their employment has risen 1.3 million since last January, accounting for more than 60 percent of the gain in civilian employment over the year.

The civilian labor force advanced by 450,000 in January after seasonal adjustment, bringing the total change over the year to almost 2.3 million. Adult women accounted for more than half of the increase; their labor force participation rate rose by nearly a full percentage point over the year. A substantial labor force increase also occurred among the Hispanic population. Since January a year ago, their labor force participation rate has risen about 2.5 percentage points.

The number of unemployed workers remained at 8 million in January. Little change occurred over the month among the major worker groups.

The present economic expansion reached its 50th month in January. As is typical following a recession as steep as that of 1981-82, improvements in the labor market were very strong during the early part of the recovery period; labor market change has been much slower in the last 2 years.

When we compare the current recovery to the 50 months following the 1973-75 recession, some interesting differences become apparent. In both periods, a large number of jobs were added, but in the recovery period of the late 1970's the number of factory jobs created was more than double that of the current recovery. As we have discussed before, labor force growth has been considerably smaller in the current recovery than in the earlier period. Employment growth has been higher only for the black population. The unemployment rate has come down somewhat more sharply in the current recovery but remains a full percentage point higher than in May 1979, the 50th month of recovery after the 1973-75 recession.

In summary, the data for January show weakness in manufacturing but strength elsewhere in the economy. The data sustain the December decline in unemployment, although the number of jobless persons remains at 8 million.

Since my last appearance here before this committee, Mr. Chairman, the Bureau has issued its reports on consumer prices for December and international prices for the fourth quarter of 1986. I would like to say just a few things about those data.

The year 1986 saw three important trends in import prices. First, fuel imports, primarily crude petroleum, registered substantial price decreases during the year and, despite an upturn during the fourth quarter, were down about 50 percent from their levels of a year earlier. Second, prices of goods imported primarily from industrial countries whose currencies have strengthened against the dollar, have risen substantially—anywhere from 10 to 22 percent. And third, trade categories affected by increasing competition from countries whose currencies are tied to the dollar have shown much smaller price increases.

As we discussed earlier this year, noticeable increases in nonenergy import prices began in the fourth quarter of 1985. For all of 1986, import prices, excluding fuels, rose 8.4 percent. During the fourth quarter of 1986, however, these price increases slowed to 0.6 percent, the smallest one-quarter rise in this index since the third quarter of 1985. While the relatively small size of this increase is perhaps puzzling, it took place in a period when the dollar demonstrated little movement. The recent steep decline in the dollar began after price data for the fourth quarter import indexes had been collected.

Meanwhile, for the third year in a row, the average price of U.S. exports moved down. Despite an increase of 1.2 percent during the fourth quarter, the average price in exports declined 0.5 percent in 1986. When the decline in the trading value of the dollar is factored in, the price of our exports in foreign currency terms has, of course, gone down even more. But it does seem that this price decline has not as yet led to any significant rise in the total value of U.S. exports.

In the area of consumer prices, the CPI-U advanced 1.1 percent for the 12-month period ended in December 1986. This compares with increases of about 4 percent in each of the preceding 4 years and was the smallest annual increase since a 0.7 percent rise in 1961. The sharp drop in energy prices—in particular, petroleum-based energy—was almost entirely responsible for the deceleration in the overall index in 1986. Excluding energy, the CPI-U rose 3.8 percent during 1986, compared with increases of 4.0 to 4.5 percent in each of the prior 4 years.

The release of data for December really marks the last release of data for the CPI based on the old market basket. It has been our custom to discuss with the Joint Economic Committee any changes in our indicators. I will not take your time to read the material that is here. I just want to say that we expect to introduce an updated and revised CPI for January on February 27. We have been working very hard on this for several years now and we very much look forward to issuing the improved and updated CPI which will have its market basket based upon expenditure data from 1982, 1983, and 1984. We will have a completely new and expanded and improved housing sample which will improve the home ownership costs component of the index, and there will be a number of other important changes.

Now we will be happy to try to answer any questions you may have.

[The prepared statement of Mrs. Norwood, together with an attached table and the Employment Situation press release, follows:]

FOR RELEASE: 9:30 A.M.,E.S.T.
FRIDAY, FEBRUARY 6, 1987

Advance copies of this statement are made available to the press with the explicit understanding that, prior to the 8:30 a.m. Eastern time: (1) Wire services will not move over their wires copy based on information in this statement, (2) electronic media will not feed such information to member stations, and (3) representatives of news organizations will not contact anyone outside the Bureau of Labor Statistics to ask questions about or solicit comments about information in this statement.

Prepared Statement of

Dr. Janet L. Norwood
Commissioner
Bureau of Labor Statistics

before the

Joint Economic Committee
UNITED STATES CONGRESS

February 6, 1987

Mr. Chairman and Members of the Committee:

I am very pleased to be here this morning to offer the Joint Economic Committee a few comments to supplement the Employment Situation.

In January, both employment and the labor force rose, after adjustment for seasonality. Unemployment -- at 6.6 percent overall and 6.7 percent for civilians -- was unchanged, sustaining the improvement that occurred in December.

As you know, winter weather conditions in construction and other outdoor activities, and the end of holiday shopping in retail trade and services, usually result in employment cutbacks and unemployment increases in January. This year, the employment declines were much less than usual, making the seasonally adjusted data quite positive.

Payroll jobs, as measured by the business survey, were up by 450,000 after seasonal adjustment. Construction activity was more vigorous than usual, in part reflecting favorable weather conditions and the surge in building permits that occurred at the end of last year. After several months of non-growth, construction employment rose by 140,000 in January (seasonally adjusted).

Employment in manufacturing, which had grown by 80,000 in the last quarter of last year, was unchanged in January. Although small gains occurred in lumber, printing, and chemical manufacturing after seasonal adjustment, small job losses in many other manufacturing industries offset these gains. Nevertheless, weekly factory hours, at 40.9, continued at a very high level. As a result, the index of aggregate weekly factory hours rose by 0.5 percent over the month.

As has been the case during most of the current recovery period, a large part of the seasonally adjusted payroll growth in January was in the service-producing sector. Employment in retail trade grew by 165,000 after seasonal adjustment. Fewer workers had been hired during the holiday selling season, and layoffs in the industry were therefore much smaller than usual. Business and health services continued to push up employment in the services industry, and gains occurred in finance, insurance and real estate. Over the past year, employment in retail trade has risen more than 600,000, jobs in services were up 1.1 million, and employment in finance, insurance and real estate grew by nearly 400,000.

Total civilian employment, as measured by the household survey, rose by 375,000 after seasonal adjustment, as the overall employment-population ratio hit 61.1 percent. About 200,000 of this increase was among adult women; their employment has risen 1.3 million since last January, accounting for more than 60 percent of the gain in civilian employment over the year.

The civilian labor force advanced by 450,000 in January after seasonal adjustment, bringing the total change over the year to almost 2.3 million. Adult women accounted for more than half of the increase; their labor force participation rate rose by nearly a full percentage point over the year. A substantial labor force increase also occurred among the Hispanic population. Since January a year ago, their labor force participation rate has risen about 2-1/2 percentage points.

The number of unemployed workers remained at 8 million in January (after seasonal adjustment). Little change occurred over the month among the major worker groups.

The present economic expansion reached its fiftieth month in January. As is typical following a recession as steep as that of 1981-82, improvements in the labor market were very strong during the early part of the recovery period; labor market change has been much slower in the last 2 years.

When we compare the current recovery to the 50 months following the 1973-75 recession, some interesting differences become apparent. In both periods, a large number of jobs were added, but in the recovery period of the late 1970's the number of factory jobs created was more than double that of the current recovery. As we have discussed before, labor force growth has been considerably smaller in the current recovery than in the earlier period. Employment growth has been higher only for the black population. The unemployment rate has come down somewhat more sharply in the current recovery but remains a full percentage point higher than in May 1979, the fiftieth month of recovery after the 1973-75 recession.

In summary, the data for January show weakness in manufacturing but strength elsewhere in the economy. The data sustain the December decline in unemployment, although the number of jobless persons remains at 8 million.

Prices

Since my last appearance before this Committee, the Bureau has issued its reports on Consumer Prices for December and International Prices for the fourth quarter of 1986. I would like to take a moment to summarize these data briefly.

The year 1986 saw three important trends in import prices. First, fuel imports, primarily crude petroleum, registered substantial price decreases during the year and, despite an upturn during the fourth quarter, were down about 50 percent from their levels of a year earlier. Second, prices of goods imported primarily from industrial countries whose currencies have strengthened against the dollar, have risen substantially, -- from 10 percent to 22 percent. And third, trade categories affected by increasing competition from countries whose currencies are tied to the dollar, have shown much smaller price increases.

As I indicated earlier this year, noticeable increases in non-energy import prices began in the fourth quarter of 1985, a development which coincided with the Group of Five Finance Ministers' meeting and the subsequent sharp decline in the trading value of the dollar. For all of 1986, import prices, excluding fuels, rose 8.4 percent. During the fourth quarter of 1986, however, these price increases slowed to 0.6 percent, the smallest one-quarter rise in this index since the third quarter of 1985. While the relatively small size of this increase is perhaps puzzling, it took place in a period when the dollar demonstrated little movement. The recent steep decline in the dollar began after price data for the fourth quarter import indexes had been collected.

Meanwhile, for the third year in a row, the average price of U.S. exports moved down. Despite an increase of 1.2 percent during the fourth quarter, the average price of exports declined 0.5 percent in 1986. When the decline in the trading value of the dollar is factored in, the price of our exports in foreign currency terms has, of course, gone down even more for some of our trading partners. It would seem, however, that this price decline has not as yet led to any significant rise in the total value of U.S. exports.

In the area of consumer prices, the CPI-U advanced 1.1 percent for the 12-month period ended in December 1986. This compares with increases of about 4 percent in each of the preceding 4 years and was the smallest annual increase since a 0.7 percent rise in 1961. The sharp drop in energy prices--in particular, petroleum based energy--was almost entirely responsible for the deceleration in the overall index in 1986. Excluding energy, the CPI-U rose 3.8 percent during 1986, compared with increases of 4.0 to 4.5 percent in each of the prior 4 years. The food index accelerated somewhat in 1986, reflecting an upturn in meat and poultry prices. On the other hand, shelter costs rose somewhat less in 1986. Excluding food, shelter, and energy, the CPI-U rose at a modest pace in 1986. Within this group of items, charges for services remained in the 5 to 6 percent range while, in contrast, prices of goods rose only 1.4 percent. In particular, costs for medical care services, automobile insurance, and tuition continued to advance sharply in 1986.

The release of the December 1986 figures on the Consumer Price Index marked the last release of data before introduction of an updated and revised CPI for January on February 27. The last major revision of the CPI, in 1978, moved the market basket to goods and services purchased by consumers in 1972-73. Since then, Americans have changed substantially the things they buy and the way they live. The CPI is being updated to reflect these changes.

After the revision, both the CPI-U and CPI-W will have expenditure weights based upon data tabulated from 3 years (1982, 1983, and 1984) of Consumer Expenditure Surveys. In addition to expenditure shifts among existing goods and services, products such as personal computers, and compact disc stereo equipment, which were not available for pricing in 1972-73, will be introduced into the index.

The January index will also reflect a more current geographic distribution of consumers. Expenditure patterns of consumers in the South and West will have a larger influence on the CPI than before. The January CPI will also improve the rental equivalence measure used to measure homeownership costs. In addition, other technical improvements will be made over the next 2 years.

As in the past, BLS will publish an old series CPI based on the old market basket for a 6-month overlap period to provide index users ample time to adjust to the new index. We have spent a good deal of time over the past several years on the CPI revision effort, including a public information effort to inform interested parties of the nature, purpose and scope of the program. We very much look forward to issuing the improved and updated CPI.

My colleagues and I will now be happy to answer any questions you may have.

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unad-justed rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1986									
January.....	7.3	6.8	6.8	6.8	6.7	6.8	6.6	6.7	.2
February....	7.8	7.2	7.2	7.2	7.2	7.2	7.2	7.3	.1
March.......	7.5	7.2	7.2	7.1	7.1	7.1	7.1	7.1	.1
April.......	7.0	7.1	7.1	7.1	7.2	7.1	7.1	7.1	.1
May.........	7.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	-
June........	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	-
July........	7.0	7.0	7.0	7.0	7.0	6.9	7.0	7.0	.1
August......	6.7	6.8	6.8	6.8	6.8	6.9	7.0	6.8	.2
September...	6.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	-
October.....	6.6	6.9	6.9	7.0	7.0	6.9	6.9	7.0	.1
November....	6.6	6.9	6.9	7.0	6.9	6.9	7.0	7.0	.1
December....	6.3	6.7	6.7	6.7	6.6	6.7	6.7	6.7	.1
1987									
January.....	7.3	6.7	6.7	6.7	6.7	6.8	6.6	6.7	.2

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
February 1987

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1975 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1985 would be based, during 1985, on the adjustment of data from the period January 1975 through January 1985.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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TRANSMISSION OF MATERIAL IN THIS RELEASE IS EMBARGOED UNTIL 8:30 A.M. (EST), FRIDAY, FEBRUARY 6, 1987

THE EMPLOYMENT SITUATION: JANUARY 1987

Employment continued to rise in January and unemployment was unchanged, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall unemployment rate of 6.6 percent and the civilian worker rate of 6.7 percent remained at the levels to which they had declined in December.

Nonagricultural payroll employment--as measured by the monthly survey of business establishments--rose by 450,000, and civilian employment--as measured by the monthly survey of households--advanced by 375,000. Both surveys continued to show over-the-year employment gains in excess of 2 million.

Unemployment (Household Survey Data)

The number of unemployed persons (seasonally adjusted) was about unchanged in January at 8.0 million, as were the jobless rates for nearly all major labor force groups. The rates for adult men (6.0 percent), adult women (5.9 percent), teenagers (17.7 percent), whites (5.9 percent), blacks (14.3 percent), and Hispanics (10.6 percent) showed little or no change from December. (See tables A-2 and A-3.)

There were also few changes in the distribution of unemployment by duration in January, and the mean and median duration figures remained at 15.0 and 7.0 weeks, respectively. The numbers of unemployed job losers and labor force entrants also were little different from December levels. (See tables A-7 and A-8.)

Civilian Employment and the Labor Force (Household Survey Data)

Civilian employment, which usually declines substantially from December to January, fell less than seasonally expected this January. As a result, employment showed a seasonally adjusted increase of 375,000, and the proportion of the civilian population that is employed rose to a very high 61.1 percent. (See tables A-2 and A-4.)

The civilian labor force expanded by 450,000 to 119.0 million in January, after seasonal adjustment. Over the year, the labor force was up by 2.3 million, with adult women accounting for 55 percent of the gain. The civilian labor force participation rate increased to 65.5 percent.

Industry Payroll Employment (Establishment Survey Data)

Total nonagricultural payroll employment rose by 450,000 in January, after adjustment for seasonality, to 101.7 million. Over-the-month

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Dec.-Jan. change
	1986		1986		1987	
	III	IV	Nov.	Dec.	Jan.	
HOUSEHOLD DATA						
	Thousands of persons					
Labor force 1/	119,866	120,308	120,426	120,336	120,782	446
Total employment 1/	111,675	112,170	112,183	112,387	112,759	372
Civilian labor force	118,171	118,558	118,675	118,586	119,034	448
Civilian employment	109,980	110,420	110,432	110,637	111,011	374
Unemployment	8,191	8,138	8,243	7,949	8,023	74
Not in labor force	62,664	62,807	62,688	62,961	62,793	-168
Discouraged workers	1,150	1,127	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	6.8	6.8	6.8	6.6	6.6	0
All civilian workers	6.9	6.9	6.9	6.7	6.7	0
Adult men	6.1	6.1	6.2	6.0	6.0	0
Adult women	6.1	6.0	6.1	5.9	5.9	0
Teenagers	18.1	17.8	18.2	17.3	17.7	0.4
White	6.0	6.0	6.0	5.8	5.9	.1
Black	14.5	14.1	14.2	13.7	14.3	.6
Hispanic origin	10.8	10.2	9.6	10.5	10.6	.1
ESTABLISHMENT DATA						
	Thousands of jobs					
Nonfarm employment	100,316	p101,062	101,068	p101,293	p101,741	p448
Goods-producing	24,872	p24,892	24,891	p24,920	p25,054	p134
Service-producing	75,444	p76,170	76,177	p76,373	p76,687	p314
	Hours of work					
Average weekly hours:						
Total private	34.7	p34.7	34.8	p34.6	p34.7	p0.1
Manufacturing	40.7	p40.8	40.8	p40.8	p40.9	p.1
Overtime	3.5	p3.5	3.5	p3.5	p3.6	p.1

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

increases occurred in 56 percent of the 185 industries in the BLS index of diffusion. (See tables B-1 and B-6.)

In the service-producing sector, after seasonal adjustment, large job gains were registered in retail trade--165,000--and the services industry--115,000. Retail employment typically declines in January following the end of the holiday shopping season. However, because pre-Christmas hiring this season was less than in the past, post-holiday job cutbacks were smaller than usual, resulting in a sharp increase in retail trade employment after seasonal adjustment. Employment also increased in the wholesale trade and finance, insurance, and real estate industry, while it was little changed in transportation and public utilities and government.

Within the goods sector, employment in construction also declined less than usually expected in January and, after seasonal adjustment, rose by 140,000. Manufacturing employment was unchanged in January, after edging up in each of the previous 3 months. Changes were small and offsetting among the 21 industries within manufacturing. Employment in mining, which has been particularly weak since the beginning of 1986, declined further over the month.

Weekly Hours (Establishment Survey Data)

Average weekly hours of production or nonsupervisory workers on private nonagricultural payrolls edged up 0.1 hour to 34.7, after seasonal adjustment. In manufacturing, both the workweek and overtime hours rose a tenth of an hour, reaching the relatively high levels of 40.9 and 3.6 hours, respectively. (See table B-2.)

The index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls rose by 0.7 percent to 119.8 (1977=100), after seasonal adjustment. The factory index rose by 0.5 percent to 93.8. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings were about unchanged in January, while average weekly earnings rose 0.4 percent, seasonally adjusted. Prior to seasonal adjustment, average hourly earnings increased 5 cents to $8.88, but, owing to a seasonal decline in the workweek, average weekly earnings were down $2.70 to $305.47. Over the past year, average hourly earnings have risen by 16 cents, and average weekly earnings were up $2.89. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 170.8 (1977=100) in January, seasonally adjusted, an increase of 0.1 percent from December. For the 12 months ended in January, the increase was 2.0 percent. The HEI excludes the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. In dollars of constant purchasing power, the HEI increased 1.0 percent during the 12-month period ended in December. (See table B-4.)

The Employment Situation for February 1987 will be released on Friday, March 6, at 8:30 A.M. (EST).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes 250,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. At the time the first half year's factors are calculated (upon availability of data for December), historical data for the previous 5-year period are subject to revision. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $4.50 per issue or $31.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Jan. 1986	Dec. 1986	Jan. 1987	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987
TOTAL									
Noninstitutional population[2]	181,361	183,297	183,575	181,361	182,713	182,935	183,114	183,297	183,575
Labor force[2]	117,122	119,799	119,451	118,485	119,988	120,163	120,426	120,336	120,782
Participation rate[3]	64.6	65.4	65.1	65.3	65.7	65.7	65.8	65.7	65.8
Total employed[2]	108,650	112,338	110,832	110,583	111,703	111,941	112,183	112,387	112,759
Employment-population ratio[4]	59.9	61.3	60.4	61.0	61.1	61.2	61.3	61.3	61.4
Resident Armed Forces	1,691	1,750	1,748	1,691	1,716	1,749	1,751	1,750	1,748
Civilian employed	106,959	110,588	109,084	108,892	109,987	110,192	110,432	110,637	111,011
Agriculture	2,819	2,826	2,705	3,280	3,142	3,162	3,215	3,161	3,145
Nonagricultural industries	104,140	107,762	106,379	105,612	106,845	107,030	107,217	107,476	107,866
Unemployed	8,472	7,461	8,620	7,902	8,285	8,222	8,243	7,949	8,023
Unemployment rate[5]	7.2	6.2	7.2	6.7	6.9	6.8	6.8	6.6	6.6
Not in labor force	64,239	63,498	64,124	62,876	62,725	62,772	62,688	62,961	62,793
Men, 16 years and over									
Noninstitutional population[2]	86,882	87,868	88,020	86,882	87,556	87,682	87,773	87,868	88,020
Labor force[2]	65,833	66,950	66,880	66,666	67,128	67,130	67,407	67,425	67,672
Participation rate[3]	75.8	76.2	76.0	76.7	76.7	76.6	76.8	76.7	76.9
Total employed[2]	61,023	62,568	61,828	62,392	62,528	62,565	62,833	62,986	63,187
Employment-population ratio[4]	70.2	71.2	70.2	71.8	71.4	71.4	71.6	71.7	71.8
Resident Armed Forces	1,539	1,593	1,591	1,539	1,560	1,590	1,592	1,593	1,591
Civilian employed	59,484	60,975	60,237	60,853	60,968	60,975	61,241	61,393	61,596
Unemployed	4,810	4,382	5,052	4,274	4,600	4,565	4,574	4,439	4,485
Unemployment rate[5]	7.3	6.5	7.6	6.4	6.9	6.8	6.8	6.6	6.6
Women, 16 years and over									
Noninstitutional population[2]	94,479	95,429	95,556	94,479	95,156	95,253	95,341	95,429	95,556
Labor force[2]	51,289	52,849	52,571	51,819	52,860	53,033	53,019	52,911	53,110
Participation rate[3]	54.3	55.4	55.0	54.8	55.6	55.7	55.6	55.4	55.6
Total employed[2]	47,627	49,770	49,003	48,191	49,175	49,376	49,350	49,401	49,572
Employment-population ratio[4]	50.4	52.2	51.3	51.0	51.7	51.8	51.8	51.8	51.9
Resident Armed Forces	152	157	157	152	156	159	159	157	157
Civilian employed	47,475	49,613	48,846	48,039	49,019	49,217	49,191	49,244	49,415
Unemployed	3,663	3,079	3,568	3,628	3,685	3,657	3,669	3,510	3,538
Unemployment rate[5]	7.1	5.8	6.8	7.0	7.0	6.9	6.9	6.6	6.7

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[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Jan. 1986	Dec. 1986	Jan. 1987	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987
TOTAL									
Civilian noninstitutional population	179,670	181,547	181,827	179,670	180,997	181,186	181,363	181,547	181,827
Civilian labor force	115,431	118,049	117,703	116,794	118,272	118,416	118,675	118,586	119,034
Participation rate	64.2	65.0	64.7	65.0	65.3	65.4	65.4	65.3	65.5
Employed	106,959	110,588	109,084	108,892	109,987	110,192	110,432	110,637	111,011
Employment-population ratio[2]	59.5	60.9	60.0	60.6	60.8	60.8	60.9	60.9	61.1
Unemployed	8,472	7,461	8,620	7,902	8,285	8,222	8,243	7,949	8,023
Unemployment rate	7.3	6.3	7.3	6.8	7.0	6.9	6.9	6.7	6.7
Men, 20 years and over									
Civilian noninstitutional population	78,101	78,973	79,132	78,101	78,722	78,802	78,874	78,973	79,132
Civilian labor force	60,734	61,665	61,588	61,143	61,412	61,409	61,703	61,826	61,948
Participation rate	77.8	78.1	77.8	78.3	78.0	77.9	78.2	78.3	78.3
Employed	56,645	57,959	57,290	57,599	57,607	57,595	57,883	58,101	58,227
Employment-population ratio[2]	72.5	73.4	72.4	73.7	73.2	73.1	73.4	73.6	73.6
Agriculture	2,119	2,128	2,044	2,340	2,286	2,297	2,303	2,289	2,254
Nonagricultural industries	54,526	55,831	55,246	55,259	55,321	55,298	55,580	55,812	55,974
Unemployed	4,089	3,706	4,297	3,544	3,805	3,814	3,820	3,725	3,720
Unemployment rate	6.7	6.0	7.0	5.8	6.2	6.2	6.2	6.0	6.0
Women, 20 years and over									
Civilian noninstitutional population	87,112	88,016	88,150	87,112	87,779	87,856	87,933	88,016	88,150
Civilian labor force	47,715	49,057	48,966	47,897	48,920	49,014	49,043	48,923	49,161
Participation rate	54.8	55.7	55.5	55.0	55.7	55.8	55.8	55.6	55.8
Employed	44,666	46,512	45,970	44,952	45,905	46,020	46,067	46,058	46,261
Employment-population ratio[2]	51.3	52.8	52.1	51.6	52.3	52.4	52.4	52.3	52.5
Agriculture	559	545	520	677	614	612	675	621	628
Nonagricultural industries	44,107	45,966	45,450	44,275	45,291	45,408	45,392	45,437	45,633
Unemployed	3,049	2,546	2,996	2,945	3,015	2,994	2,976	2,865	2,900
Unemployment rate	6.4	5.2	6.1	6.1	6.2	6.1	6.1	5.9	5.9
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,458	14,558	14,545	14,458	14,496	14,527	14,557	14,558	14,545
Civilian labor force	6,982	7,327	7,149	7,754	7,940	7,991	7,929	7,837	7,926
Participation rate	48.3	50.3	49.2	53.6	54.8	55.0	54.5	53.8	54.5
Employed	5,648	6,117	5,823	6,341	6,475	6,577	6,482	6,475	6,524
Employment-population ratio[2]	39.1	42.0	40.0	43.9	44.7	45.3	44.5	44.5	44.9
Agriculture	142	153	141	263	242	253	237	251	264
Nonagricultural industries	5,506	5,964	5,682	6,078	6,233	6,324	6,245	6,227	6,260
Unemployed	1,334	1,209	1,326	1,413	1,465	1,414	1,447	1,359	1,402
Unemployment rate	19.1	16.5	18.5	18.2	18.5	17.7	18.2	17.3	17.7

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Jan. 1986	Dec. 1986	Jan. 1987	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987
WHITE									
Civilian noninstitutional population	154,784	156,111	156,313	154,784	155,723	155,856	155,979	156,111	156,313
Civilian labor force	99,885	101,983	101,662	100,993	102,158	102,297	102,455	102,503	102,746
Participation rate	64.5	65.3	65.0	65.2	65.6	65.6	65.7	65.7	65.7
Employed	93,421	96,388	95,036	95,099	96,000	96,147	96,281	96,533	96,717
Employment-population ratio[2]	60.4	61.7	60.8	61.4	61.6	61.7	61.7	61.8	61.9
Unemployed	6,464	5,596	6,625	5,894	6,158	6,150	6,174	5,970	6,029
Unemployment rate	6.5	5.5	6.5	5.8	6.0	6.0	6.0	5.8	5.9
Men, 20 years and over									
Civilian labor force	53,214	53,970	53,889	53,558	53,727	53,757	54,015	54,172	54,182
Participation rate	78.1	78.5	78.3	78.6	78.4	78.3	78.7	78.8	78.7
Employed	50,027	51,094	50,476	50,864	50,845	50,845	51,089	51,286	51,297
Employment-population ratio[2]	73.5	74.3	73.3	74.7	74.2	74.1	74.4	74.6	74.5
Unemployed	3,188	2,876	3,413	2,694	2,882	2,912	2,926	2,886	2,885
Unemployment rate	6.0	5.3	6.3	5.0	5.4	5.4	5.4	5.3	5.3
Women, 20 years and over									
Civilian labor force	40,606	41,619	41,535	40,724	41,547	41,598	41,540	41,514	41,680
Participation rate	54.3	55.2	55.0	54.4	55.2	55.2	55.1	55.0	55.2
Employed	38,315	39,808	39,331	38,535	39,365	39,431	39,399	39,456	39,568
Employment-population ratio[2]	51.2	52.8	52.1	51.5	52.3	52.3	52.3	52.3	52.4
Unemployed	2,291	1,812	2,204	2,189	2,182	2,167	2,141	2,058	2,111
Unemployment rate	5.6	4.4	5.3	5.4	5.3	5.2	5.2	5.0	5.1
Both sexes, 16 to 19 years									
Civilian labor force	6,065	6,394	6,237	6,711	6,884	6,942	6,900	6,817	6,885
Participation rate	51.1	53.8	52.4	56.6	57.9	58.4	58.0	57.3	57.8
Employed	5,080	5,486	5,229	5,700	5,790	5,871	5,793	5,791	5,852
Employment-population ratio[2]	42.8	46.1	43.9	48.0	48.7	49.4	48.7	48.7	49.2
Unemployed	985	908	1,009	1,011	1,094	1,071	1,107	1,026	1,033
Unemployment rate	16.2	14.2	16.2	15.1	15.9	15.4	16.0	15.1	15.0
Men	17.3	16.1	18.4	15.0	16.6	15.7	16.3	15.5	16.1
Women	15.1	12.3	13.8	15.1	15.1	15.2	15.7	14.6	13.8
BLACK									
Civilian noninstitutional population	19,837	20,152	20,187	19,837	20,056	20,089	20,120	20,152	20,187
Civilian labor force	12,296	12,598	12,558	12,561	12,652	12,720	12,719	12,707	12,831
Participation rate	62.0	62.5	62.2	63.3	63.1	63.3	63.2	63.1	63.6
Employed	10,531	10,980	10,809	10,723	10,799	10,895	10,910	10,968	10,997
Employment-population ratio[2]	53.1	54.5	53.5	54.1	53.8	54.2	54.2	54.4	54.5
Unemployed	1,765	1,618	1,749	1,838	1,853	1,825	1,809	1,739	1,833
Unemployment rate	14.4	12.8	13.9	14.6	14.6	14.3	14.2	13.7	14.3
Men, 20 years and over									
Civilian labor force	5,819	5,932	5,911	5,890	5,906	5,932	5,934	5,947	5,986
Participation rate	74.3	74.3	73.9	75.2	74.4	74.6	74.5	74.5	74.9
Employed	5,039	5,249	5,167	5,131	5,116	5,153	5,171	5,244	5,256
Employment-population ratio[2]	64.3	65.8	64.6	65.5	64.5	64.8	65.0	65.7	65.7
Unemployed	779	683	744	759	790	779	763	703	730
Unemployment rate	13.4	11.5	12.6	12.9	13.4	13.1	12.9	11.8	12.2
Women, 20 years and over									
Civilian labor force	5,704	5,908	5,913	5,772	5,872	5,909	5,943	5,907	5,984
Participation rate	57.8	58.9	58.9	58.5	58.8	59.1	59.3	58.9	59.6
Employed	5,038	5,251	5,195	5,066	5,145	5,178	5,200	5,182	5,221
Employment-population ratio[2]	51.1	52.4	51.7	51.4	51.5	51.8	51.9	51.7	52.0
Unemployed	666	657	718	706	727	731	743	725	763
Unemployment rate	11.7	11.1	12.1	12.2	12.4	12.4	12.5	12.3	12.8
Both sexes, 16 to 19 years									
Civilian labor force	773	758	734	899	874	879	842	853	860
Participation rate	36.1	35.4	34.2	42.0	40.9	41.1	39.3	39.8	40.1
Employed	454	480	447	526	538	564	539	542	520
Employment-population ratio[2]	21.2	22.4	20.8	24.6	25.2	26.3	25.1	25.3	24.2
Unemployed	319	279	287	373	336	315	303	311	340
Unemployment rate	41.3	36.8	39.1	41.5	38.4	35.8	36.0	36.5	39.5
Men	42.4	38.3	36.9	41.1	38.6	37.8	35.0	36.1	36.5
Women	40.2	35.2	41.7	41.9	38.3	33.8	37.0	36.[illegible]	43.2
HISPANIC ORIGIN									
Civilian noninstitutional population	12,148	12,540	12,653	12,148	12,432	12,469	12,505	12,540	12,653
Civilian labor force	7,688	8,235	8,310	7,796	8,179	8,200	8,226	8,320	8,431
Participation rate	63.3	65.7	65.7	64.2	65.8	65.8	65.8	66.3	66.6
Employed	6,830	7,406	7,357	6,994	7,286	7,345	7,437	7,446	7,538
Employment-population ratio[2]	56.2	59.1	58.1	57.6	58.6	58.9	59.5	59.4	59.6
Unemployed	857	829	953	802	893	855	789	874	893
Unemployment rate	11.2	10.1	11.5	10.3	10.9	10.4	9.6	10.5	10.6

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(Numbers in thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1986	Dec. 1986	Jan. 1987	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987
CHARACTERISTIC									
Civilian employed, 16 years and over	106,959	110,588	109,084	108,892	109,987	110,192	110,432	110,637	111,011
Married men, spouse present	39,060	40,055	39,621	39,558	39,691	39,780	39,952	40,093	40,107
Married women, spouse present	26,769	27,895	27,470	26,820	27,249	27,323	27,333	27,400	27,525
Women who maintain families	5,679	5,965	5,961	5,703	5,926	6,016	6,041	6,005	5,985
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,325	1,417	1,335	1,642	1,521	1,562	1,582	1,621	1,650
Self-employed workers	1,374	1,292	1,271	1,482	1,460	1,451	1,425	1,400	1,370
Unpaid family workers	120	117	99	165	159	164	198	152	136
Nonagricultural industries:									
Wage and salary workers	96,327	99,430	98,100	97,752	98,692	98,846	98,869	99,164	99,550
Government	16,434	16,588	16,510	16,333	16,333	16,264	16,457	16,443	16,412
Private industries	79,893	82,842	81,591	81,419	82,359	82,582	82,412	82,721	83,138
Private households	1,134	1,167	1,160	1,245	1,229	1,216	1,183	1,189	1,269
Other industries	78,759	81,675	80,431	80,174	81,130	81,366	81,229	81,532	81,869
Self-employed workers	7,555	8,088	8,045	7,693	7,939	7,993	8,179	8,056	8,192
Unpaid family workers	257	243	233	271	275	265	252	239	246
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,593	5,494	5,538	5,551	5,544	5,740	5,563	5,596	5,505
Slack work	2,674	2,506	2,770	2,377	2,472	2,481	2,510	2,444	2,475
Could only find part-time work	2,638	2,758	2,479	2,870	2,772	2,826	2,714	2,867	2,695
Voluntary part time	14,139	14,805	14,453	13,877	13,922	14,178	14,021	13,877	14,170
Nonagricultural industries:									
Part time for economic reasons	5,370	5,226	5,263	5,297	5,303	5,450	5,319	5,342	5,201
Slack work	2,511	2,313	2,557	2,231	2,314	2,314	2,346	2,286	2,281
Could only find part-time work	2,582	2,689	2,425	2,770	2,710	2,739	2,626	2,765	2,599
Voluntary part time	13,710	14,449	14,080	13,386	13,520	13,736	13,567	13,455	13,750

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure		Quarterly averages					Monthly data		
		1985	1986				1986		1987
		IV	I	II	III	IV	Nov.	Dec.	Jan.
U-1	Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.8
U-2	Job losers as a percent of the civilian labor force	3.5	3.5	3.5	3.4	3.3	3.3	3.3	3.3
U-3	Unemployed persons 25 years and over as a percent of the civilian labor force	5.4	5.5	5.5	5.4	5.4	5.5	5.2	5.2
U-4	Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.7	6.7	6.8	6.6	6.5	6.6	6.3	6.4
U-5a	**Total unemployed as a percent of the labor force, including the resident Armed Forces**	7.0	7.0	7.0	6.8	6.8	6.8	6.6	6.6
U-5b	**Total unemployed as a percent of the civilian labor force**	7.1	7.1	7.1	6.9	6.9	6.9	6.7	6.7
U-6	Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.5	9.4	9.6	9.3	9.2	9.3	9.1	9.1
U-7	Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.4	10.4	10.5	10.2	10.2	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Jan. 1986	Dec. 1986	Jan. 1987	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987
CHARACTERISTIC									
Total, 16 years and over	7,902	7,949	8,021	6.8	7.0	6.9	6.9	6.7	6.7
Men, 16 years and over	4,274	4,439	4,484	6.6	7.0	7.0	6.9	6.7	6.8
Men, 20 years and over	3,544	3,725	3,720	5.8	6.2	6.2	6.2	6.0	6.0
Women, 16 years and over	3,628	3,510	3,528	7.0	7.0	6.9	6.9	6.7	6.7
Women, 20 years and over	2,945	2,865	2,900	6.1	6.2	6.1	6.1	5.9	5.9
Both sexes, 16 to 19 years	1,413	1,359	1,402	18.2	18.5	17.7	18.2	17.5	17.7
Married men, spouse present	1,782	1,822	1,772	4.3	4.3	4.6	4.5	4.3	4.2
Married women, spouse present	1,452	1,378	1,392	5.1	5.1	5.0	5.0	4.8	4.8
Women who maintain families	658	656	647	9.9	9.8	8.9	9.7	9.8	9.8
Full-time workers	6,500	6,465	6,534	6.5	6.6	6.6	6.6	6.3	6.5
Part-time workers	1,437	1,459	1,523	8.7	9.3	9.2	9.1	8.3	9.0
Labor force time lost[2]	--	--	--	7.7	7.9	7.8	7.7	7.6	7.6
INDUSTRY									
Nonagricultural private wage and salary workers	5,933	5,989	6,007	6.8	7.0	7.0	7.0	6.8	6.7
Mining	110	133	136	10.7	13.9	16.5	14.5	14.3	15.0
Construction	793	834	784	12.8	12.9	13.8	15.1	13.7	12.2
Manufacturing	1,572	1,504	1,470	7.1	7.0	7.3	7.1	6.9	6.5
Durable goods	937	841	889	7.4	6.5	7.2	6.6	6.4	6.8
Nondurable goods	635	663	581	7.2	7.7	7.3	7.9	7.7	6.0
Transportation and public utilities	277	290	301	4.5	4.7	5.2	4.9	4.6	4.2
Wholesale and retail trade	1,606	1,632	1,701	7.3	7.6	7.4	7.2	7.2	7.5
Finance and service industries	1,575	1,596	1,615	5.1	5.6	5.4	5.4	5.1	5.2
Government workers	592	569	613	3.5	3.5	3.7	3.6	3.5	3.6
Agricultural wage and salary workers	213	211	216	11.5	12.9	11.9	10.1	11.5	11.4

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1986	Dec. 1986	Jan. 1987	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987
DURATION									
Less than 5 weeks	3,645	2,972	3,493	3,373	3,415	3,418	3,382	3,355	3,416
5 to 14 weeks	2,617	2,443	2,619	2,505	2,524	2,563	2,613	2,389	2,519
15 weeks and over	2,210	2,046	2,288	2,117	2,373	2,168	2,217	2,171	2,200
15 to 26 weeks	1,087	954	1,105	1,003	1,110	950	1,045	1,023	1,022
27 weeks and over	1,122	1,092	1,183	1,114	1,263	1,218	1,172	1,148	1,178
Average (mean) duration, in weeks	14.4	15.4	14.4	15.0	15.5	15.2	14.8	15.0	15.0
Median duration, in weeks	6.6	7.5	6.8	6.8	7.1	7.0	7.0	7.1	7.0
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	43.0	39.8	42.8	42.2	41.1	41.9	41.2	42.6	41.9
5 to 14 weeks	30.9	32.7	30.6	31.3	30.4	31.5	31.8	30.2	31.1
15 weeks and over	26.1	27.4	26.5	26.5	28.5	26.6	27.0	27.4	27.0
15 to 26 weeks	12.8	12.8	12.8	12.5	13.6	11.7	12.7	12.9	12.5
27 weeks and over	13.2	14.6	13.7	13.9	15.2	14.9	14.3	14.5	14.5

Table A-8. Reason for unemployment

(Numbers in thousands)

Reason	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1986	Dec. 1986	Jan. 1987	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987
NUMBER OF UNEMPLOYED									
Job losers	4,452	3,936	4,662	3,802	4,044	3,984	3,947	3,890	3,971
On layoff	1,579	1,126	1,550	1,143	1,029	1,072	1,073	1,078	1,118
Other job losers	2,873	2,810	3,112	2,659	3,015	2,912	2,874	2,812	2,854
Job leavers	1,041	929	952	977	1,041	1,027	1,056	1,036	891
Reentrants	2,120	1,795	2,087	2,083	2,145	2,190	2,119	2,019	2,054
New entrants	861	801	918	1,029	1,038	972	1,076	1,015	1,084
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	52.5	52.8	54.1	48.2	48.9	48.7	48.1	48.9	49.6
On layoff	18.6	15.1	18.0	14.5	12.4	13.1	13.1	13.5	14.0
Other job losers	33.9	37.7	36.1	33.7	36.5	35.6	35.1	35.3	35.7
Job leavers	12.3	12.5	11.0	12.4	12.6	12.6	12.9	13.0	11.1
Reentrants	25.0	24.1	24.2	26.4	25.9	26.8	25.8	25.4	25.7
New entrants	10.2	10.7	10.7	13.0	12.6	11.9	13.1	12.8	13.6
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	3.9	3.4	3.9	3.3	3.4	3.4	3.3	3.3	3.3
Job leavers	.9	.8	.8	.8	.9	.9	.9	.9	.7
Reentrants	1.8	1.5	1.8	1.8	1.8	1.8	1.8	1.7	1.7
New entrants	.7	.7	.8	.9	.9	.8	.9	.9	.9

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Jan. 1986	Dec. 1986	Jan. 1987	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987
Total, 16 years and over	7,902	7,949	8,023	6.8	7.0	6.9	6.9	6.7	6.7
16 to 24 years	3,056	2,986	3,045	13.1	13.6	13.0	12.9	12.9	13.1
16 to 19 years	1,413	1,359	1,402	18.2	18.5	17.7	18.2	17.3	17.7
16 to 17 years	658	629	683	21.0	20.0	19.3	20.6	18.8	20.1
18 to 19 years	770	737	735	16.6	17.2	16.5	16.7	16.3	16.2
20 to 24 years	1,643	1,627	1,643	10.5	11.1	10.5	10.2	10.7	10.7
25 years and over	4,884	4,961	5,024	5.2	5.4	5.5	5.5	5.2	5.2
25 to 54 years	4,307	4,422	4,552	5.5	5.6	5.7	5.8	5.5	5.6
55 years and over	581	527	477	3.9	4.0	4.1	3.8	3.5	3.2
Men, 16 years and over	4,274	4,439	4,484	6.6	7.0	7.0	6.9	6.7	6.8
16 to 24 years	1,598	1,623	1,626	13.1	14.3	13.2	13.4	13.4	13.4
16 to 19 years	730	714	764	18.3	19.1	18.2	18.3	17.8	18.5
16 to 17 years	344	325	380	21.3	21.0	19.8	21.3	19.1	21.4
18 to 19 years	401	395	401	16.8	17.5	17.0	16.7	17.0	16.9
20 to 24 years	868	909	862	10.5	11.9	10.7	10.9	11.3	10.7
25 years and over	2,712	2,809	2,901	5.1	5.4	5.5	5.5	5.2	5.4
25 to 54 years	2,359	2,462	2,578	5.4	5.5	5.7	5.7	5.5	5.7
55 years and over	345	351	310	3.9	4.2	4.4	4.1	4.0	3.5
Women, 16 years and over	3,628	3,510	3,538	7.0	7.0	6.9	6.9	6.7	6.7
16 to 24 years	1,458	1,363	1,419	13.1	12.8	12.7	12.4	12.4	12.7
16 to 19 years	683	645	638	18.1	17.7	17.2	18.2	16.8	16.8
16 to 17 years	314	304	303	20.6	18.8	18.6	19.8	18.4	18.7
18 to 19 years	369	342	334	16.4	16.9	14.0	17.2	15.7	15.3
20 to 24 years	775	718	781	10.6	10.2	10.3	9.4	10.0	10.6
25 years and over	2,172	2,152	2,124	5.4	5.5	5.4	5.5	5.2	5.1
25 to 54 years	1,948	1,960	1,974	5.6	5.8	5.7	5.8	5.5	5.5
55 years and over	236	176	167	3.9	3.6	3.6	3.4	2.9	2.7

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Jan. 1986	Dec. 1986	Jan. 1987	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987
Civilian noninstitutional population	24,886	25,436	25,515	24,886	25,274	25,330	25,385	25,436	25,515
Civilian labor force	15,546	16,065	16,042	15,875	16,072	16,148	16,192	16,157	16,384
Participation rate	62.5	63.2	62.9	63.8	63.6	63.8	63.8	63.5	64.2
Employed	13,538	14,200	14,047	13,801	13,964	14,097	14,137	14,170	14,316
Employment-population ratio[2]	54.4	55.8	55.1	55.5	55.3	55.7	55.7	55.7	56.1
Unemployed	2,008	1,865	1,994	2,074	2,108	2,051	2,055	1,987	2,068
Unemployment rate	12.9	11.6	12.4	13.1	13.1	12.7	12.7	12.3	12.6
Not in labor force	9,340	9,371	9,473	9,011	9,202	9,182	9,193	9,279	9,131

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Jan. 1986	Jan. 1987	Jan. 1986	Jan. 1987	Jan. 1986	Jan. 1987
Total, 16 years and over[1]	106,959	109,084	8,472	8,620	7.3	7.3
Managerial and professional specialty	26,396	27,160	609	704	2.3	2.5
Executive, administrative, and managerial	12,444	12,826	323	386	2.5	2.9
Professional specialty	13,952	14,333	286	319	2.0	2.2
Technical, sales, and administrative support	33,415	34,387	1,649	1,723	4.7	4.8
Technicians and related support	3,257	3,233	112	127	3.3	3.8
Sales occupations	12,697	13,073	706	751	5.3	5.4
Administrative support, including clerical	17,461	18,081	831	845	4.5	4.5
Service occupations	14,476	14,791	1,429	1,451	9.0	8.9
Private household	967	962	75	66	7.2	6.4
Protective service	1,783	1,844	104	121	5.5	6.2
Service, except private household and protective	11,726	11,985	1,251	1,264	9.6	9.5
Precision production, craft, and repair	12,936	13,279	1,175	1,153	8.3	8.0
Mechanics and repairers	4,265	4,412	247	240	5.5	5.2
Construction trades	4,634	4,729	619	643	11.8	12.0
Other precision production, craft, and repair	4,036	4,139	310	270	7.1	6.1
Operators, fabricators, and laborers	16,777	16,744	2,361	2,292	12.3	12.0
Machine operators, assemblers, and inspectors	7,831	7,602	998	941	11.3	11.0
Transportation and material moving occupations	4,399	4,580	521	517	10.6	10.1
Handlers, equipment cleaners, helpers, and laborers	4,547	4,562	842	834	15.6	15.5
Construction laborers	605	626	228	259	27.4	29.2
Other handlers, equipment cleaners, helpers, and laborers	3,942	3,936	613	575	13.5	12.7
Farming, forestry, and fishing	2,960	2,722	318	324	9.7	10.6

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Jan. 1986	Jan. 1987	Jan. 1986	Jan. 1987	Jan. 1986	Jan. 1987	Jan. 1986	Jan. 1987	Jan. 1986	Jan. 1987
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,688	7,798	7,140	7,267	6,720	6,834	420	433	5.9	6.0
30 to 44 years	6,421	6,295	6,142	6,047	5,773	5,665	369	382	6.0	6.3
30 to 34 years	1,273	1,026	1,210	977	1,110	861	100	116	8.3	11.9
35 to 39 years	3,158	2,819	3,042	2,720	2,839	2,563	203	157	6.7	5.8
40 to 44 years	1,990	2,450	1,890	2,350	1,824	2,241	66	109	3.5	4.6
45 years and over	1,267	1,503	998	1,220	947	1,169	51	51	5.1	4.2
NONVETERANS										
Total, 30 to 44 years	17,914	18,986	16,911	18,023	15,918	16,893	993	1,130	5.9	6.3
30 to 34 years	8,252	8,698	7,801	8,271	7,333	7,717	468	554	6.0	6.7
35 to 39 years	5,465	5,993	5,169	5,684	4,875	5,344	294	340	5.7	6.0
40 to 44 years	4,197	4,295	3,941	4,068	3,710	3,832	231	236	5.9	5.8

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Jan. 1986	Dec. 1986	Jan. 1987	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987
California									
Civilian noninstitutional population	19,905	20,314	20,364	19,905	20,205	20,242	20,275	20,315	20,364
Civilian labor force	13,015	13,389	13,382	13,040	13,492	13,491	13,540	13,476	13,403
Employed	12,163	12,546	12,464	12,271	12,623	12,598	12,625	12,569	12,568
Unemployed	853	843	917	769	869	893	915	907	835
Unemployment rate	6.6	6.3	6.9	5.9	6.4	6.6	6.8	6.7	6.2
Florida									
Civilian noninstitutional population	9,053	9,285	9,312	9,053	9,223	9,244	9,261	9,285	9,312
Civilian labor force	5,353	5,722	5,666	5,417	5,574	5,679	5,725	5,726	5,720
Employed	5,052	5,458	5,338	5,113	5,242	5,368	5,405	5,449	5,406
Unemployed	302	264	329	304	332	311	320	277	314
Unemployment rate	5.6	4.6	5.8	5.6	6.0	5.5	5.6	4.8	5.5
Illinois									
Civilian noninstitutional population	8,647	8,667	8,674	8,647	8,662	8,664	8,668	8,667	8,674
Civilian labor force	5,591	5,615	5,583	5,656	5,729	5,678	5,640	5,643	[illegible]
Employed	5,116	5,224	5,124	5,216	5,265	5,252	5,223	5,223	[illegible]
Unemployed	475	391	459	441	464	425	417	420	[illegible]
Unemployment rate	8.5	7.0	8.2	7.8	8.1	7.5	7.4	7.4	[illegible]
Massachusetts									
Civilian noninstitutional population	4,544	4,559	4,563	4,545	4,555	4,557	4,557	4,559	4,563
Civilian labor force	3,122	3,056	3,020	3,054	3,052	3,047	3,043	3,053	[illegible]
Employed	2,995	2,961	2,897	2,950	2,929	2,929	2,922	2,951	[illegible]
Unemployed	127	95	123	104	123	118	121	102	136
Unemployment rate	4.1	3.1	4.1	3.4	4.0	3.9	4.0	3.3	4.5
Michigan									
Civilian noninstitutional population	6,830	6,888	6,897	6,833	6,873	6,878	6,882	6,888	6,897
Civilian labor force	4,330	4,477	4,416	4,399	4,386	4,441	4,472	4,497	4,496
Employed	3,916	4,136	4,058	4,022	3,998	4,065	4,099	4,135	4,161
Unemployed	414	341	358	377	388	376	373	362	335
Unemployment rate	9.6	7.6	8.1	8.6	8.8	8.5	8.3	8.0	7.4
New Jersey									
Civilian noninstitutional population	5,895	5,948	5,956	5,895	5,934	5,937	5,947	5,951	5,956
Civilian labor force	3,832	3,852	3,813	3,875	3,918	3,876	3,914	3,900	3,857
Employed	3,569	3,701	3,637	3,645	3,729	3,674	3,737	3,727	3,718
Unemployed	263	151	176	230	189	202	177	173	139
Unemployment rate	6.9	3.9	4.6	5.9	4.8	5.2	4.5	4.4	3.6
New York									
Civilian noninstitutional population	13,711	13,747	13,759	13,711	13,719	13,742	13,742	13,747	13,759
Civilian labor force	8,430	8,454	8,499	8,433	8,434	8,397	8,378	8,423	8,511
Employed	7,869	7,994	7,976	7,895	7,929	7,907	7,895	7,921	8,009
Unemployed	561	460	523	538	505	490	483	502	502
Unemployment rate	6.7	5.4	6.2	6.4	6.0	5.8	5.8	6.0	5.9
North Carolina									
Civilian noninstitutional population	4,719	4,792	4,802	4,717	4,773	4,780	4,785	4,792	4,802
Civilian labor force	3,160	3,218	3,227	3,204	3,207	3,206	3,201	3,221	3,271
Employed	2,974	3,063	3,058	3,031	3,034	3,041	3,029	3,048	3,115
Unemployed	186	155	169	173	173	165	172	173	156
Unemployment rate	5.9	4.8	5.2	5.4	5.4	5.1	5.4	5.4	4.8
Ohio									
Civilian noninstitutional population	8,093	8,115	8,122	8,093	8,110	8,112	8,112	8,115	8,122
Civilian labor force	5,177	5,259	5,196	5,218	5,163	5,214	5,264	5,276	5,287
Employed	4,752	4,841	4,744	4,759	4,734	4,810	4,875	4,861	4,850
Unemployed	425	418	452	459	429	404	389	415	437
Unemployment rate	8.2	7.9	8.7	8.8	8.3	7.7	7.4	7.9	8.3
Pennsylvania									
Civilian noninstitutional population	9,220	9,254	9,262	9,220	9,246	9,249	9,250	9,254	9,262
Civilian labor force	5,493	5,478	5,490	5,615	5,646	5,597	5,557	5,528	5,610
Employed	5,048	5,220	5,131	5,187	5,264	5,244	5,212	5,229	5,267
Unemployed	445	258	359	428	382	353	345	299	343
Unemployment rate	8.1	4.7	6.5	7.6	6.8	6.3	6.2	5.4	6.1
Texas									
Civilian noninstitutional population	11,882	12,089	12.115	11,882	12,034	12,052	12,069	12,089	12.115
Civilian labor force	7,923	8,317	8,209	8,006	8,202	8,288	8,301	8,354	8,293
Employed	7,378	7,593	7,402	7,473	7,454	7,506	7,508	7,550	7,497
Unemployed	545	724	807	533	748	782	793	804	796
Unemployment rate	6.9	8.7	9.8	6.7	9.1	9.4	9.6	9.6	9.6

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[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

NOTE: The not seasonally adjusted data for 1986 have been revised to reflect the latest 1986 population estimates for the States. These revised estimates were used to develop seasonally adjusted data for 1986 and seasonal factors to be used in 1987.

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Jan. 1986	Nov. 1986	Dec. 1986 p	Jan. 1987 p	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986 p	Jan. 1987 p
Total	97,903	101,879	101,948	100,296	99,296	100,560	100,826	101,068	101,293	101,741
Total private	81,286	84,673	84,792	83,407	82,659	83,786	83,956	84,178	84,368	84,830
Goods producing	24,512	25,104	24,839	24,449	25,101	24,858	24,865	24,891	24,920	25,054
Mining	891	746	740	724	897	743	746	742	740	729
Oil and gas extraction	564.1	423.3	420.7	415.7	556	422	423	420	413	410
Construction	4,481	5,143	4,927	4,702	4,901	5,010	5,001	4,993	4,997	5,139
General building contractors	1,231.9	1,339.5	1,286.5	1,246.3	1,330	1,301	1,302	1,307	1,296	1,344
Manufacturing	19,140	19,215	19,172	19,023	19,303	19,105	19,118	19,156	19,183	19,186
Production workers	12,969	13,074	13,041	12,920	13,111	12,960	12,974	13,020	13,051	13,059
Durable goods	11,395	11,310	11,286	11,201	11,466	11,271	11,266	11,282	11,286	11,272
Production workers	7,537	7,480	7,463	7,396	7,595	7,438	7,435	7,452	7,463	7,451
Lumber and wood products	689.7	742.6	734.0	724.8	716	734	737	743	747	751
Furniture and fixtures	494.8	505.3	507.0	505.9	494	500	500	500	502	505
Stone, clay, and glass products	573.6	595.9	586.3	571.4	596	594	590	591	593	593
Primary metal industries	798.5	744.6	745.7	741.0	798	749	749	751	752	740
Blast furnaces and basic steel products	300.0	265.1	266.6	265.8	300	270	272	271	270	266
Fabricated metal products	1,446.6	1,436.0	1,434.8	1,420.8	1,455	1,433	1,429	1,427	1,431	1,429
Machinery, except electrical	2,133.6	2,031.7	2,032.4	2,029.4	2,137	2,044	2,039	2,036	2,030	2,033
Electrical and electronic equipment	2,181.8	2,168.6	2,167.1	2,161.2	2,182	2,162	2,167	2,166	2,165	2,161
Transportation equipment	1,994.9	2,001.2	1,999.7	1,975.6	1,996	1,979	1,979	1,993	1,986	1,976
Motor vehicles and equipment	862.1	841.9	839.2	817.0	867	834	824	837	828	820
Instruments and related products	722.5	710.4	710.5	708.0	724	713	713	710	710	710
Miscellaneous manufacturing	358.5	373.8	368.5	362.9	368	363	363	365	370	373
Nondurable goods	7,745	7,905	7,886	7,822	7,837	7,834	7,852	7,874	7,897	7,914
Production workers	5,432	5,594	5,578	5,524	5,516	5,522	5,539	5,568	5,588	5,608
Food and kindred products	1,574.0	1,657.4	1,646.7	1,618.6	1,623	1,644	1,644	1,654	1,657	1,669
Tobacco manufactures	66.1	62.5	62.2	61.4	64	60	59	61	60	59
Textile mill products	698.3	719.6	719.8	714.7	702	709	711	717	719	718
Apparel and other textile products	1,118.0	1,118.7	1,119.7	1,104.3	1,133	1,110	1,113	1,112	1,124	1,119
Paper and allied products	682.8	695.1	696.8	693.1	687	691	694	694	697	697
Printing and publishing	1,459.4	1,498.7	1,502.7	1,496.9	1,461	1,485	1,491	1,493	1,494	1,498
Chemicals and allied products	1,027.4	1,020.7	1,017.9	1,017.7	1,034	1,025	1,023	1,023	1,020	1,025
Petroleum and coal products	164.5	159.9	157.4	156.3	168	162	161	160	159	160
Rubber and miscellaneous plastics products	794.7	808.5	810.1	810.1	802	797	805	809	814	817
Leather and leather products	159.4	154.2	152.5	149.0	163	151	151	151	153	152
Service-producing	73,391	76,775	77,109	75,847	74,195	75,702	75,961	76,177	76,373	76,687
Transportation and public utilities	5,217	5,376	5,390	5,294	5,286	5,316	5,316	5,351	5,359	5,363
Transportation	3,000	3,142	3,155	3,073	3,056	3,088	3,094	3,117	3,124	3,129
Communication and public utilities	2,217	2,234	2,235	2,221	2,230	2,228	2,222	2,234	2,235	2,234
Wholesale trade	5,791	5,876	5,862	5,836	5,830	5,859	5,864	5,859	5,855	5,974
Durable goods	3,453	3,492	3,487	3,478	3,470	3,485	3,489	3,489	3,487	3,495
Nondurable goods	2,338	2,384	2,375	2,358	2,360	2,374	2,375	2,370	2,368	2,379
Retail trade	17,486	18,452	18,799	18,107	17,734	18,065	18,143	18,197	18,198	18,364
General merchandise stores	2,386.6	2,518.9	2,624.6	2,441.1	2,328	2,362	2,379	2,367	2,327	2,382
Food stores	2,874.4	3,004.0	3,040.7	3,000.0	2,880	2,952	2,963	2,968	2,978	3,006
Automotive dealers and service stations	1,912.1	1,971.4	1,969.8	1,975.7	1,929	1,970	1,973	1,977	1,984	1,994
Eating and drinking places	5,550.8	5,958.1	5,994.8	5,785.6	5,831	5,948	5,982	6,006	6,049	6,077
Finance, insurance, and real estate	6,072	6,414	6,453	6,440	6,123	6,388	6,409	6,429	6,469	6,491
Finance	3,059	3,214	3,233	3,235	3,066	3,202	3,212	3,220	3,236	3,241
Insurance	1,873	1,977	1,988	1,995	1,878	1,962	1,971	1,979	1,990	1,999
Real estate	1,140	1,223	1,232	1,210	1,179	1,224	1,226	1,230	1,243	1,251
Services	22,208	23,451	23,449	23,281	22,585	23,300	23,359	23,451	23,567	23,684
Business services	4,597.3	4,965.1	4,981.7	4,928.3	4,660	4,883	4,908	4,926	4,962	4,998
Health services	6,431.3	6,688.2	6,715.5	6,749.3	6,447	6,649	6,677	6,695	6,729	6,763
Government	16,617	17,206	17,156	16,889	16,637	16,774	16,870	16,890	16,925	16,911
Federal	2,892	2,879	2,899	2,886	2,918	2,901	2,896	2,899	2,911	2,912
State	3,880	4,080	4,050	3,940	3,916	3,932	3,959	3,965	3,978	3,976
Local	9,845	10,247	10,207	10,063	9,803	9,941	10,015	10,026	10,036	10,023

p = preliminary.

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Jan. 1986	Nov. 1986	Dec. 1986 p	Jan. 1987 p	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986 p	Jan. 1987 p
Total private	34.7	34.7	34.9	34.4	35.0	34.7	34.7	34.8	34.6	34.7
Mining	44.4	41.6	42.4	42.3	(2)	(2)	(2)	(2)	(2)	(2)
Construction	37.2	36.5	36.9	37.4	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.7	41.0	41.6	40.8	40.8	40.8	40.7	40.8	40.8	40.9
Overtime hours	3.3	3.6	3.8	3.5	3.5	3.5	3.5	3.5	3.5	3.6
Durable goods	41.4	41.6	42.2	41.4	41.5	41.4	41.3	41.4	41.3	41.5
Overtime hours	3.5	3.7	3.9	3.5	3.6	3.6	3.6	3.6	3.5	3.6
Lumber and wood products	39.7	40.3	40.4	39.8	40.4	40.1	40.3	40.7	40.3	40.5
Furniture and fixtures	39.4	40.0	40.9	39.7	40.0	40.0	39.8	39.6	39.6	40.3
Stone, clay, and glass products	41.6	41.9	42.0	41.3	42.7	42.5	42.3	41.9	42.1	42.4
Primary metal industries	41.8	42.4	43.0	42.6	41.9	42.0	42.3	42.4	42.5	42.7
Blast furnaces and basic steel products	41.3	42.1	42.7	41.9	41.7	41.6	42.3	42.5	42.7	42.4
Fabricated metal products	41.4	41.5	42.1	41.3	41.5	41.5	41.2	41.4	41.1	41.4
Machinery, except electrical	41.7	41.9	42.8	42.0	41.6	41.7	41.6	41.7	41.6	42.0
Electrical and electronic equipment	41.1	41.4	42.0	40.9	41.0	41.2	40.9	41.0	40.9	40.8
Transportation equipment	43.0	43.5	43.3	42.6	42.8	42.6	42.1	42.3	42.0	42.4
Motor vehicles and equipment	43.6	42.8	43.7	42.9	43.6	42.7	42.1	42.6	42.3	42.9
Instruments and related products	41.1	41.5	42.3	41.4	41.1	40.7	41.1	41.2	41.3	41.4
Miscellaneous manufacturing	39.8	40.2	40.3	39.6	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	39.8	40.3	40.7	40.0	39.9	39.9	39.9	40.1	40.1	40.2
Overtime hours	3.2	3.6	3.6	3.4	3.3	3.3	3.4	3.5	3.5	3.5
Food and kindred products	39.9	40.2	40.5	39.8	40.1	39.7	39.8	40.0	39.9	40.0
Tobacco manufactures	37.7	38.4	37.9	37.4	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	40.7	41.9	42.5	41.7	40.8	41.6	41.5	41.5	42.0	41.8
Apparel and other textile products	36.6	37.2	37.4	36.9	36.7	36.7	36.7	36.9	37.0	37.0
Paper and allied products	43.5	43.4	44.0	43.5	43.6	43.0	43.0	43.2	43.2	43.6
Printing and publishing	37.7	38.4	38.7	37.8	38.0	38.0	38.0	38.1	38.0	38.1
Chemicals and allied products	41.8	42.6	42.9	42.6	41.9	42.0	42.2	42.5	42.4	42.6
Petroleum and coal products	43.2	43.5	43.9	43.5	43.5	43.4	43.7	43.8	43.8	43.8
Rubber and miscellaneous plastics products	41.6	41.7	42.2	41.4	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	37.1	37.2	37.9	37.3	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	39.0	39.1	39.2	38.1	39.4	38.9	39.1	39.1	39.0	38.5
Wholesale trade	38.3	38.4	38.5	38.1	38.5	38.2	38.4	38.3	38.3	38.3
Retail trade	28.7	29.1	29.5	28.3	29.3	29.2	29.1	29.3	28.9	28.9
Finance, insurance, and real estate	36.4	36.7	36.6	36.5	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.4	32.4	32.4	32.1	32.6	32.3	32.4	32.5	32.4	32.3

[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Jan. 1986	Nov. 1986	Dec. 1986 p	Jan. 1987 p	Jan. 1986	Nov. 1986	Dec. 1986 p	Jan. 1987 p
Total private	$8.72	$8.85	$8.83	$8.88	$302.58	$307.10	$308.17	$305.47
Seasonally adjusted	8.68	8.84	8.82	8.83	303.80	307.63	305.17	306.40
Mining	12.24	12.57	12.61	12.65	543.46	522.91	534.66	535.10
Construction	12.34	12.59	12.71	12.57	459.05	458.34	469.00	470.12
Manufacturing	9.70	9.77	9.84	9.83	394.79	400.57	409.34	401.06
Durable goods	10.27	10.33	10.40	10.37	425.18	429.73	438.88	429.32
Lumber and wood products	8.30	8.39	8.34	8.26	329.51	338.12	336.94	328.15
Furniture and fixtures	7.36	7.52	7.59	7.56	289.98	300.80	310.43	300.13
Stone, clay, and glass products	9.96	10.13	10.17	10.18	414.34	424.45	427.14	420.43
Primary metal industries	11.81	11.87	11.94	11.90	493.66	503.29	513.42	506.94
Blast furnaces and basic steel products	13.48	13.78	13.88	13.84	556.72	580.14	592.68	579.90
Fabricated metal products	9.85	9.93	10.03	9.98	407.79	412.10	422.26	412.17
Machinery, except electrical	10.50	10.59	10.66	10.66	437.85	443.72	456.25	442.72
Electrical and electronic equipment	9.60	9.75	9.84	9.81	394.56	403.65	413.28	401.23
Transportation equipment	12.91	12.92	13.00	12.93	555.13	549.10	562.90	550.82
Motor vehicles and equipment	13.66	13.52	13.63	13.62	595.58	575.95	595.61	584.30
Instruments and related products	9.12	9.61	9.84	9.67	383.05	398.82	407.77	400.34
Miscellaneous manufacturing	7.48	7.65	7.72	7.74	297.20	302.51	311.12	306.50
Nondurable goods	8.86	9.00	9.05	9.07	352.63	362.70	368.34	362.80
Food and kindred products	8.72	8.79	8.89	8.92	347.93	353.36	360.05	355.02
Tobacco manufactures	11.89	12.62	12.90	13.06	448.75	483.51	488.91	488.44
Textile mill products	6.85	7.07	7.13	7.12	279.80	296.23	303.01	296.90
Apparel and other textile products	5.82	5.83	5.83	5.86	211.91	216.88	218.04	216.33
Paper and allied products	11.02	11.17	11.24	11.22	479.37	484.78	494.56	488.07
Printing and publishing	9.85	10.11	10.11	10.14	371.35	388.22	391.26	383.29
Chemicals and allied products	11.86	12.15	12.19	12.16	495.75	517.59	522.95	518.02
Petroleum and coal products	14.26	14.26	14.40	14.29	616.03	626.01	637.16	621.62
Rubber and miscellaneous plastics products	8.69	8.81	8.87	8.84	359.77	367.38	374.31	365.99
Leather and leather products	5.86	5.98	5.98	6.00	217.41	222.46	226.64	221.80
Transportation and public utilities	11.59	11.75	11.72	11.72	452.01	461.78	459.42	446.15
Wholesale trade	9.28	9.46	9.44	9.44	355.42	361.26	363.44	359.66
Retail trade	6.03	6.07	6.05	6.09	173.06	174.81	178.48	172.35
Finance, insurance, and real estate	8.14	8.54	8.49	8.51	296.30	311.42	310.74	314.87
Services	8.12	8.31	8.30	8.15	263.09	269.24	268.42	268.04

[1] See footnote 1, table B-2.
p = preliminary

NOTE: Corrected seasonally adjusted average hourly and weekly earnings for total private in September 1986 are $8.76 and $303.87, respectively.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Jan. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Percent change from: Jan. 1986-Jan. 1987	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Percent change from: Dec. 1986-Jan. 1987
Total private nonfarm:												
Current dollars	167.9	170.9	171.1	171.3	2.0	167.3	169.6	170.3	170.8	170.6	170.8	0.1
Constant (1977) dollars	94.0	95.1	95.4	N.A.	(2)	93.5	95.0	95.1	95.3	95.0	N.A.	(3)
Mining	180.9	182.4	182.3	183.0	1.2	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	150.0	153.4	154.4	152.6	1.7	149.7	151.2	152.6	154.0	153.9	152.3	-1.1
Manufacturing	171.4	173.2	174.0	174.1	1.6	170.7	172.8	173.1	173.2	173.6	173.4	-.1
Transportation and public utilities	169.3	172.2	172.2	172.2	1.7	168.6	170.8	170.9	171.2	171.1	171.6	.3
Wholesale trade	171.1	174.5	174.0	174.0	1.7	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	157.3	159.0	158.8	159.2	1.2	157.9	159.1	159.1	159.1	159.3	158.9	-.2
Finance, insurance, and real estate	175.8	183.9	182.6	184.9	5.2	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	172.7	177.2	177.0	177.8	2.9	171.7	174.4	175.3	176.6	175.7	176.7	.6

1 See footnote 1, table B-2.
2 Percent change is 1.0 percent from December 1985 to December 1986, the latest month available.
3 Percent change is -0.3 percent from November 1986 to December 1986, the latest month available.
4 These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
N.A. Data not available
p = preliminary

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Jan. 1986	Nov. 1986	Dec. 1986 p	Jan. 1987 p	Jan. 1986	Sept. 1986	Oct. 1986	Nov. 1986	Dec. 1986 p	Jan. 1987 p
Total	114.4	119.9	120.6	116.3	117.8	118.3	118.6	119.3	119.0	119.8
Goods-producing	96.8	99.9	99.8	96.7	100.6	98.7	98.5	98.8	98.9	100.6
Mining	104.3	81.7	82.5	79.6	104.5	81.2	82.1	81.1	81.2	79.7
Construction	116.4	134.6	128.6	122.3	136.1	134.2	133.0	131.8	132.1	141.0
Manufacturing	92.6	94.1	95.0	92.5	93.9	92.7	92.6	93.3	93.3	93.8
Durable goods	91.6	91.3	92.5	89.9	92.6	90.5	90.1	90.6	90.4	90.9
Lumber and wood products	93.7	102.1	101.2	98.1	99.1	100.5	101.4	103.3	102.8	103.8
Furniture and fixtures	104.7	109.0	111.8	107.9	105.7	107.6	107.3	106.3	106.8	109.2
Stone, clay, and glass products	82.9	87.7	86.2	82.1	89.1	88.3	87.3	85.7	87.8	88.1
Primary metal industries	66.7	61.9	63.1	62.2	66.7	61.8	62.2	62.6	62.9	62.2
Blast furnaces and basic steel products	56.8	47.7	48.8	48.0	53.6	48.4	49.7	49.3	49.5	48.4
Fabricated metal products	90.1	89.9	91.1	88.5	91.0	89.4	88.6	89.0	88.8	89.3
Machinery, except electrical	90.4	85.6	87.3	85.9	90.2	85.8	85.3	85.1	84.8	85.8
Electrical and electronic equipment	104.1	104.1	105.7	102.7	103.8	102.9	102.3	102.9	102.6	102.4
Transportation equipment	98.8	97.3	99.0	95.8	98.2	95.9	94.9	96.3	95.0	95.1
Motor vehicles and equipment	89.7	85.4	87.4	82.8	92.1	84.4	82.1	84.6	83.0	83.7
Instruments and related products	105.2	105.1	107.5	104.8	105.3	103.5	104.2	103.9	104.7	104.7
Miscellaneous manufacturing	78.3	84.9	83.5	80.7	82.6	79.9	79.9	81.3	82.5	84.7
Nondurable goods	94.1	98.2	98.8	96.3	95.9	96.0	96.3	97.2	97.6	98.1
Food and kindred products	93.7	102.1	101.1	97.3	98.2	98.9	99.0	100.6	100.5	101.8
Tobacco manufactures	87.0	85.1	82.9	79.6	85.2	76.6	77.5	78.9	78.8	77.3
Textile mill products	76.8	81.8	82.9	81.0	77.6	79.6	79.9	80.7	81.9	81.7
Apparel and other textile products	85.8	87.6	88.1	85.5	87.3	85.6	85.9	86.4	87.6	87.0
Paper and allied products	101.2	103.1	105.2	103.6	102.3	101.2	102.0	102.7	103.5	104.6
Printing and publishing	125.2	131.7	133.7	129.7	126.4	128.9	129.7	130.2	130.3	131.1
Chemicals and allied products	92.6	94.6	94.5	94.2	93.6	93.6	93.7	94.8	93.7	95.1
Petroleum and coal products	77.7	79.9	78.5	77.5	80.6	78.9	79.4	79.6	79.6	80.4
Rubber and miscellaneous plastics products	111.6	115.1	116.6	114.4	112.4	113.4	113.5	114.8	114.9	114.9
Leather and leather products	60.7	58.8	59.6	57.3	62.6	56.6	56.8	57.5	59.1	59.2
Service-producing	124.2	130.9	132.2	127.2	127.3	129.2	129.7	130.7	130.1	130.4
Transportation and public utilities	105.3	109.2	109.3	104.3	107.0	106.6	107.3	108.6	108.2	106.8
Wholesale trade	118.6	120.3	120.2	117.0	119.0	119.3	119.8	119.5	119.4	119.6
Retail trade	113.6	121.7	126.0	115.8	117.8	119.6	119.7	120.8	119.1	120.7
Finance, insurance, and real estate	132.0	140.5	140.5	139.7	133.5	138.7	139.7	141.1	140.6	141.1
Services	139.8	147.5	147.3	146.8	143.2	146.0	146.8	147.9	148.1	148.2

[1] See footnote 1, table B-2

p = preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1985.........	52.4	47.8	53.8	49.2	51.6	47.0	56.2	56.8	50.8	61.9	57.6	59.5
	1986.........	59.7	53.5	45.1	54.1	49.2	46.2	54.6	54.3	54.9	55.1	62.7	p61.9
	1987.........	p56.2											
Over 3-month span	1985.........	51.1	49.7	46.2	46.2	45.1	51.4	49.7	51.1	55.1	55.9	61.4	60.5
	1986.........	58.1	54.3	51.1	49.7	48.4	44.9	47.3	54.1	54.9	62.4	p65.7	p65.9
	1987.........												
Over 6-month span	1985.........	49.2	47.8	43.0	45.9	44.3	44.3	48.9	50.8	54.1	57.0	57.0	55.9
	1986.........	53.8	53.8	47.6	45.9	45.9	48.6	49.7	55.4	p63.0	p63.2		
	1987.........												
Over 12-month span	1985.........	46.2	45.7	46.8	43.8	44.9	47.3	47.6	48.9	47.3	49.5	48.9	48.6
	1986.........	50.3	51.1	52.2	52.4	52.7	p54.3	p53.0					
	1987.........												

[1] Number of employees, seasonally adjusted for 1, 3, and 6-month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

p = preliminary

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.

Senator **Sarbanes**. Well, Commissioner, first, why don't you take a few moments to outline in a little more detail the changes that are being made in the CPI?

Mrs. **Norwood**. All right.

Senator **Sarbanes**. As I understand it, you're in the process of holding briefings around the country on these changes for the press and for other interested parties, is that correct?

Mrs. **Norwood**. Yes, that's right. As you know, the Consumer Price Index is used not just by the Federal Government in legislation but by an enormous number of private users—corporations who use it for escalation of contracts both for workers and others, and private individuals who use it in a variety of contracts—quite apart from the important uses of it as an inflation indicator.

So we have undertaken a rather extensive information program. We will be having a series of meetings all over the country, including in Washington, of all users before the index is issued to explain the changes.

Basically, what we have done—and it is our practice about once a decade to do this—is we have updated all of the samples in the index. The population, for example, the consumers represented in the index, will be based now on the last decennial census, the 1980 decennial census, and that means that the South and the West will have somewhat higher weight in the index than before.

I mentioned the improved housing sample. That's a really major undertaking. It is of tremendous importance given the large weight of the index that goes into both rent and home ownership.

There will be changes in the city sample in which we collect data. There will be changes in the items that are in the market basket. Some things like personal computers and compact disc stereo players which didn't exist before will have an opportunity to fall into the sample.

It is, in fact, a massive undertaking, a tremendous job at processing. Also, a whole new computer system has been developed as a part of it. We were very unhappy at trying to figure out how to make up for the couple of days that were lost because of the snow because people have been working day and night on this process in order to get it done on time.

I am extremely proud of the BLS staff who's been working so hard on this.

Senator **Sarbanes**. As I understand it, the revised CPI will reflect a market basket calculated on data for 1982 through 1984, is that correct?

Mrs. **Norwood**. That's correct.

Senator **Sarbanes**. And it will reflect the Nation's population distribution as of the 1980 census, is that correct?

Mrs. **Norwood**. That's correct.

Senator **Sarbanes**. The last time you did this, which I take it was in 1978, did you do any studies on the comparability of data? In other words, what does it do to our ability to look at a series of monthly figures and continue to make comparisons? I don't know what the figures will show, but suppose the figures for the next month show some significant shift—or even if they don't show a significant shift—to what extent do we then have to move to a different base, or can we continue to make reasonable comparisons about what's happening to the movement of the consumer prices?

Mrs. **Norwood**. That's a question, of course, that occurs any time you make an improvement in a statistical series—what does it do? What does it do to the historical time series?

What we do in the Consumer Price Index as a matter of historical tradition is that when there is a major revision we continue to provide users with 6 months of overlap with the old index, because many of our users who have embedded the index in the collective bargaining contracts, for example, need to determine what the effect of the change is.

So we do always have a 6 months overlap. That's about the best that we can do. It is an expensive process. This year we are doing it somewhat differently from the past because we have tried to make the process more efficient by spreading it out somewhat more so there will be a few more changes introduced later. But people will be able to look at this index over the next 6 months and make a judgment about whether the change has been significant from their point of view in terms of using it.

In the past, we have done that and the differences were fairly small. Interestingly, they were not always in the direction that people expected. Most people assume that when you revise a market basket and the weights that you will have less inflation. That is not necessarily true and my recollection is that in 1978 we found that, in fact, the new index was slightly higher.

This is usually only a few tenths of a percentage point, but in the CPI, one-tenth of a percentage point has a tremendous effect. That's why we are spending so much in the way of our time, all of our senior staff will be out making presentations about the CPI, including me, and we believe that this is important because half the population of this country have incomes that are in some way affected by that indicator.

Senator **Sarbanes**. So you will run, in effect, a double set of figures for 6 months?

Mrs. **Norwood**. Yes, that's right.

Senator **Sarbanes**. And you will show the CPI on the old calculation and the CPI on the new calculation?

Mrs. **Norwood**. That's correct.

Senator **Sarbanes**. And it's your view that for discounting purposes 6 months is long enough to establish the relationship between the new index and the old index?

Mrs. **Norwood**. I think 6 months is a good period. It is what we have done historically. There was one period in the 1950's when the Bureau just announced a new index and disbanded the clercial staff who produced the old one. Congress didn't think that was a very good idea and I believe it was President Eisenhower directed the Bureau to go back and rehire all of those clerks—this was before the CPI was computerized. That's the only time the Bureau did not try to have an overlap.

It's difficult to say whether 6 months enough? Is 2 years enough? One really has to make a judgment and our judgment is that our users seems to be able to make the kinds of analyses that they need to make with 6 months of data. Obviously, a year would be more data, but there is a tremendous cost involved here.

Senator SARBANES. I will probably come back to it. Let me just ask a couple of questions on the employment figures before I defer to Senator Melcher.

When you talk about an employment-to-population ratio, what is the population? What constitutes the population in that ratio?

Mrs. NORWOOD. The working age population.

Senator SARBANES. And what is the definition of the working age population?

Mrs. NORWOOD. The noninstitutional population 16 years and over.

Senator SARBANES. So the population figure is everyone in the country 16 years old or older, is that correct?

Mrs. NORWOOD. Yes, who is not living in an institution, like a jail or something like that.

Senator SARBANES. And there is no cutoff at the upper end of the age level?

Mrs. NORWOOD. No.

Senator SARBANES. So someone 85 years old is part of that population figure?

Mrs. NORWOOD. Yes, that's correct.

Senator SARBANES. And then you set against that everyone who has a job, is that correct; and that gives you your employment-to-population ratio?

Mrs. NORWOOD. Yes, whether part time or full time; everyone who is classified as employed in the survey.

Senator SARBANES. So this has nothing to do with whether people are looking for work or not looking for work?

Mrs. NORWOOD. No.

Senator SARBANES. And this ratio is now at 61.1 percent?

Mrs. NORWOOD. That's right.

Senator SARBANES. And as you look at the historical figures, that's largely because many women now have jobs? They used to be part of the population ratio since they were of working age but they weren't working, is that correct?

Mrs. NORWOOD. That's correct. That's probably the largest influence.

There's been an interesting development over the last year in particular of Hispanics, particularly Hispanic women, coming into the labor force in much larger numbers. There's been a slight increase in the employment-population ratios for the black population.

Senator SARBANES. What are those ratios?

Mrs. NORWOOD. For the black population?

Senator SARBANES. And the Hispanic and then for the rest of the population? Do you have those separate from the 61.1 percent figure?

Mrs. NORWOOD. We have it—it is now 61.9 percent for white workers; and for blacks——

Senator SARBANES. For the white workers, do you have the figure as between men and women?

Mrs. NORWOOD. Yes. The ratio for adult men is 74.5, for adult women 52.4.

Senator SARBANES. Well, now, when you say adult men, does that refer to a different definition from the one included in the population ratio of 16 and over?

Mrs. NORWOOD. Yes. It's 20 and over.

Senator SARBANES. But was the 61.9 percent figure you gave me for——

Mrs. NORWOOD. That includes the 16- to 19-year-olds as well.

Senator SARBANES. Then what are the comparable figures for men and women that go with the 61.9 percent figure? You just changed the population on me, as I understand it.

Mrs. NORWOOD. Well, I don't have——

Senator SARBANES. Is that correct?

Mrs. NORWOOD. Yes, that's correct. I changed the population on you, but I don't have the figures for all men and all women with me. We can supply them for the record.

What we generally do in looking at this is look at adult men, adult women, and teenagers, both black and white.

Senator SARBANES. Do you have the figure for adult men and women, white men and women, the overall figure that goes with the 74.5 and the 52.4?

Mrs. NORWOOD. We can supply that for the record. We have the two figures, but we'll calculate it and supply it for the record.

Senator SARBANES. All right. Can we do the same exercise with respect to the Hispanics and the black population?

Mrs. NORWOOD. Yes, we will supply that for the record.

Senator SARBANES. Could you give me now what you have, which I take it would be an employment-population ratio overall for 16 and over, but which would have adult men and women in each, is that right? Do you have that with you now?

Mrs. NORWOOD. No, I do not. What we have with us now for whites and for blacks is adult men, adult women and teenagers separately, and the total. And for Hispanics we just have the total. But we can try to supply all the other information.

[The following information was subsequently supplied for the record:]

CIVILIAN EMPLOYMENT-POPULATION RATIO - ALL CIVILIAN WORKERS

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL AVERAGE
ORIGINAL													
1980	58.9	58.9	59.0	59.0	59.0	59.5	59.9	59.6	59.0	59.3	59.2	59.0	59.2
1981	58.0	58.1	58.6	59.2	59.4	59.6	60.3	59.9	58.8	59.1	58.8	58.2	59.0
1982	57.1	57.1	57.4	57.5	58.1	58.5	58.9	58.6	57.8	57.7	57.4	57.1	57.8
1983	56.1	56.1	56.4	56.9	57.2	58.5	59.2	59.1	58.6	58.7	58.9	58.7	57.9
1984	57.7	58.0	58.5	58.9	59.7	60.6	60.9	60.4	59.8	60.0	60.0	59.8	59.5
1985	58.8	59.0	59.5	59.7	60.1	60.5	61.1	60.9	60.4	60.7	60.5	60.3	60.1
1986	59.5	59.3	59.8	60.1	60.5	61.4	61.9	61.7	60.9	61.2	61.1	60.9	60.7
	60.0	60.1											
SEASONALLY ADJUSTED													
1948	56.6	56.7	56.1	56.7	56.2	57.0	57.1	56.6	56.6	56.5	56.5	56.8	–
1949	56.2	56.2	56.0	55.7	55.4	55.0	55.0	55.1	55.3	54.9	55.6	55.3	–
1950	55.1	55.1	55.1	55.8	55.8	56.2	56.1	56.8	56.6	56.9	56.9	56.7	–
1951	56.9	57.0	57.7	57.3	57.6	57.1	57.6	57.4	57.1	57.3	57.1	57.7	–
1952	57.7	57.7	57.1	57.1	57.3	57.3	57.0	56.8	57.4	56.9	57.5	57.6	–
1953	57.8	58.0	58.1	57.5	57.1	57.4	57.4	57.1	56.8	56.7	56.5	55.7	–
1954	55.7	56.2	55.7	55.7	55.4	55.2	55.0	55.2	55.5	55.5	55.5	55.2	–
1955	55.7	55.7	55.8	56.2	56.3	56.3	56.9	57.1	57.2	57.2	57.4	57.7	–
1956	57.8	57.5	57.3	57.5	57.6	57.5	57.5	57.6	57.6	57.5	57.3	57.3	–
1957	57.0	57.5	57.6	57.2	57.1	57.2	57.5	56.9	57.0	56.8	56.4	56.6	–
1958	55.9	55.5	55.3	55.2	55.4	55.2	55.2	55.4	55.4	55.6	55.5	55.5	–
1959	55.7	55.5	56.0	56.3	56.2	56.3	56.3	56.1	56.0	56.1	55.7	56.3	–
1960	56.0	56.2	55.4	56.4	56.4	56.5	56.2	56.1	56.4	55.8	56.1	55.7	–
1961	55.7	55.5	55.6	55.2	55.2	55.6	55.2	55.3	55.0	55.3	55.5	55.3	–
1962	55.4	55.7	55.7	55.4	55.7	55.6	55.3	55.7	55.7	55.5	55.2	55.2	–
1963	55.2	55.1	55.3	55.5	55.3	55.3	55.4	55.4	55.5	55.5	55.4	55.3	–
1964	55.3	55.6	55.5	55.9	56.1	55.6	55.7	55.7	55.7	55.6	55.7	55.6	–
1965	55.7	55.7	55.9	56.0	56.2	56.1	56.5	56.3	56.2	56.4	56.4	56.6	–
1966	56.7	56.6	56.6	56.8	56.7	56.9	56.9	57.0	57.1	57.1	57.4	57.3	–
1967	57.1	57.0	56.8	57.1	57.0	57.3	57.4	57.4	57.4	57.5	57.5	57.6	–
1968	57.0	57.3	57.4	57.4	57.8	57.8	57.6	57.5	57.5	57.5	57.6	57.7	–
1969	57.6	57.9	57.9	57.9	57.8	58.0	58.0	58.1	58.1	58.1	58.1	58.1	–
1970	58.0	57.9	57.9	57.9	57.5	57.3	57.4	57.2	57.0	57.0	56.9	56.7	–
197	56.8	56.6	56.4	56.6	56.6	56.2	56.5	56.6	56.6	56.6	56.8	56.8	–
1972	56.7	56.7	56.9	56.9	57.0	57.0	57.0	57.1	57.0	57.0	57.2	57.3	–
1973	57.1	57.5	57.8	57.7	57.7	58.0	57.9	57.8	57.9	58.1	58.2	58.2	–
1974	58.2	58.2	58.2	58.0	58.0	58.0	58.0	57.8	57.7	57.6	57.3	56.9	–
1975	56.4	56.1	56.0	55.9	56.0	55.8	56.0	56.1	56.1	56.1	56.0	56.1	–
1976	56.4	56.5	56.7	56.8	57.0	56.8	57.0	57.0	56.9	56.9	57.0	57.0	–
1977	57.0	57.2	57.4	57.6	57.8	57.9	57.8	58.0	58.1	58.2	58.6	58.7	–
1978	58.8	58.8	58.8	59.2	59.3	59.5	59.3	59.4	59.5	59.7	59.8	59.8	–
1979	59.9	60.1	60.0	59.8	59.8	59.9	60.0	59.8	60.0	59.9	60.0	60.1	–
1980	60.0	60.0	59.7	59.4	59.1	58.9	58.8	58.8	58.9	58.9	59.0	59.0	–
1981	59.1	59.2	59.4	59.6	59.5	59.0	59.1	59.1	58.7	58.8	58.6	58.2	–
1982	58.2	58.2	58.1	57.9	58.2	57.8	57.7	57.8	57.6	57.4	57.3	57.2	–
1983	57.2	57.1	57.1	57.3	57.3	57.8	58.1	58.2	58.4	58.4	58.7	58.8	–
1984	58.8	59.1	59.1	59.3	59.7	59.9	59.8	59.6	59.7	59.7	59.8	59.9	–
1985	59.9	60.1	60.2	60.2	60.1	59.8	59.9	60.1	60.3	60.3	60.3	60.4	–
1986	60.6	60.4	60.5	60.5	60.5	60.7	60.8	60.9	60.8	60.8	60.9	60.9	–
	61.1	61.2											

CIVILIAN EMPLOYMENT-POPULATION RATIO - MEN 16 YEARS AND OVER

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL AVERAGE
ORIGINAL													
1980	71.5	71.5	71.7	71.6	71.9	73.1	73.7	73.2	71.7	71.9	71.4	71.1	72.0
1981	70.0	69.8	70.6	71.4	71.8	72.6	73.7	73.2	71.4	71.2	70.3	69.5	71.3
1982	68.2	68.1	68.4	68.8	69.7	70.4	71.0	70.6	68.9	68.7	68.0	67.4	69.0
1983	66.2	66.1	66.6	67.3	68.2	70.4	71.4	71.0	69.7	69.7	69.7	69.4	68.8
1984	68.3	68.6	69.1	69.7	70.7	72.5	72.9	72.5	71.3	71.2	70.9	70.4	70.7
1985	69.2	69.1	69.8	70.3	71.2	72.0	72.8	72.6	71.4	71.3	70.9	70.4	70.9
1986	69.7	69.3	69.8	70.3	70.9	72.2	72.9	72.6	71.2	71.1	71.0	70.7	71.0

69.7 69.7

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL AVERAGE
SEASONALLY ADJUSTED													
1948	83.8	83.9	83.0	83.3	83.1	83.7	83.8	83.5	83.2	83.5	83.3	83.5	-
1949	82.8	82.6	82.1	82.0	81.3	80.9	80.4	80.7	81.0	80.0	81.2	81.0	-
1950	80.7	80.7	80.7	81.1	81.6	81.8	82.0	82.8	82.9	83.0	83.1	83.0	-
1951	83.1	83.7	84.5	84.1	84.5	84.0	83.9	84.1	84.0	84.1	83.8	84.5	-
1952	84.4	84.5	84.2	84.0	84.2	84.0	83.7	83.2	83.3	83.4	83.5	84.3	-
1953	84.1	84.7	84.7	84.0	83.7	83.8	83.8	83.6	83.1	82.9	83.0	82.2	-
1954	82.0	82.0	81.0	81.1	80.8	80.7	80.6	80.8	80.9	80.6	80.7	80.6	-
1955	81.0	81.0	81.2	81.2	81.6	81.5	82.1	82.0	82.4	82.3	82.5	82.7	-
1956	82.9	82.6	82.5	82.5	82.4	82.3	82.2	82.3	82.1	82.0	81.7	81.7	-
1957	81.5	81.9	82.2	81.8	81.7	81.8	81.8	81.2	81.0	80.7	80.1	80.1	-
1958	79.3	78.7	78.3	78.1	78.3	78.1	78.2	78.3	78.6	78.9	78.7	78.6	-
1959	78.8	78.7	79.3	79.8	79.6	79.5	79.8	79.4	79.3	79.2	78.6	79.7	-
1960	79.4	79.6	78.5	79.4	79.2	78.9	78.7	78.7	78.9	78.5	78.7	78.1	-
1961	78.0	77.4	77.6	77.2	77.3	77.7	77.3	77.6	77.4	77.5	77.9	77.8	-
1962	77.8	78.2	78.2	77.7	78.1	77.8	77.5	77.7	77.7	77.7	77.2	77.2	-
1963	77.0	76.7	77.0	77.1	77.0	77.1	77.3	77.3	77.4	77.2	77.1	76.9	-
1964	76.9	77.1	77.1	77.4	77.7	77.1	77.5	77.3	77.4	77.3	77.3	77.1	-
1965	77.2	77.3	77.4	77.5	77.8	77.3	77.7	77.5	77.3	77.6	77.6	77.7	-
1966	77.8	77.7	77.7	78.0	77.8	78.0	77.9	77.9	77.7	77.9	78.0	77.9	-
1967	78.1	77.9	77.7	77.8	77.8	78.1	78.2	78.1	78.0	78.0	77.9	77.9	-
1968	77.4	77.7	77.6	77.8	77.9	78.0	78.0	78.0	77.7	77.7	77.6	77.9	-
1969	77.7	77.9	77.8	77.7	77.5	77.6	77.4	77.7	77.6	77.5	77.5	77.3	-
1970	77.3	77.1	77.1	76.7	76.6	76.0	76.0	75.7	75.7	75.4	75.4	75.2	-
1971	75.1	74.9	74.7	75.1	75.1	74.6	75.0	74.9	74.8	74.7	74.9	74.7	-
1972	74.6	74.6	74.9	74.9	74.9	75.1	75.1	75.3	75.1	75.0	75.1	75.4	-
1973	75.1	75.4	75.7	75.5	75.3	75.6	75.7	75.4	75.4	75.7	75.8	75.8	-
1974	76.0	75.8	75.5	75.1	75.3	75.0	74.8	74.7	74.6	74.4	74.1	73.4	-
1975	72.6	72.2	71.9	71.6	71.7	71.3	71.7	71.8	71.6	71.5	71.4	71.4	-
1976	71.8	71.9	71.9	72.2	72.2	71.8	72.1	72.3	72.1	72.1	72.0	72.0	-
1977	72.1	72.2	72.3	72.6	72.6	72.8	72.8	72.9	72.8	73.2	73.5	73.6	-
1978	73.5	73.4	73.3	73.6	73.8	74.1	73.8	73.9	73.7	73.8	74.1	73.9	-
1979	74.2	74.3	74.0	73.9	73.8	74.0	73.9	73.7	73.9	73.5	73.4	73.5	-
1980	73.3	73.4	73.0	72.3	71.9	71.5	71.4	71.4	71.4	71.6	71.6	71.7	-
1981	71.7	71.6	71.8	72.1	71.9	71.1	71.5	71.4	71.1	70.8	70.5	70.0	-
1982	69.9	69.9	69.6	69.5	69.7	68.9	68.8	68.8	68.6	68.4	68.2	68.0	-
1983	67.9	67.8	67.9	68.0	68.1	68.9	69.2	69.2	69.3	69.4	69.8	70.0	-
1984	70.0	70.3	70.4	70.4	70.7	71.1	70.8	70.7	70.9	70.9	71.0	71.0	-
1985	70.8	70.8	71.0	71.0	7..1	70.6	70.7	70.9	71.0	71.0	71.0	70.9	-
1986	71.3	71.0	71.0	70.9	70.8	70.9	70.9	70.9	70.9	70.8	71.1	71.2	

71.3 71.4

CIVILIAN EMPLOYMENT-POPULATION RATIO - WOMEN 16 YEARS AND OVER

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL AVERAGE
ORIGINAL													
1980	47.6	47.6	47.6	47.6	47.4	47.4	47.6	47.4	47.7	48.1	48.2	48.0	47.7
1981	47.3	47.6	47.9	48.2	48.2	48.0	48.2	48.1	47.6	48.3	48.4	48.0	48.0
1982	47.1	47.2	47.5	47.4	47.7	47.8	48.0	47.9	47.8	47.9	47.9	47.8	47.7
1983	47.0	47.0	47.2	47.5	47.4	47.8	48.3	48.5	48.7	48.9	49.1	49.1	48.0
1984	48.1	48.6	48.8	49.2	49.7	49.8	50.1	49.5	49.6	50.0	50.2	50.3	49.5
1985	49.5	49.9	50.3	50.2	50.1	50.2	50.5	50.3	50.5	51.1	51.2	51.3	50.4
1986	50.3	50.3	50.8	50.8	51.0	51.6	52.0	51.8	51.6	52.2	52.1	52.1	51.4
	51.2*	51.4.											
SEASONALLY ADJUSTED													
1948	30.9	31.0	30.7	31.6	30.9	31.9	32.0	31.3	31.7	31.1	31.3	31.6	-
1949	31.2	31.5	31.5	31.0	31.1	30.7	31.1	31.2	31.1	31.3	31.6	31.3	-
1950	31.1	31.1	31.0	32.1	31.6	32.1	31.8	32.5	32.0	32.6	32.6	32.4	-
1951	32.7	32.6	33.3	32.9	33.2	32.7	33.8	33.3	32.9	33.2	33.1	33.6	-
1952	33.7	33.5	32.9	33.1	33.3	33.4	33.1	33.1	34.2	33.3	34.2	33.8	-
1953	34.1	33.9	34.1	33.6	33.1	33.7	33.6	33.2	33.1	33.1	32.6	31.9	-
1954	31.9	33.0	32.9	32.7	32.4	32.2	31.9	32.1	32.7	32.8	32.7	32.3	-
1955	32.9	32.8	32.8	33.6	33.3	33.5	34.2	34.6	34.4	34.5	34.7	35.2	-
1956	35.0	34.8	34.5	34.9	35.2	35.1	35.0	35.2	35.4	35.2	35.1	35.2	-
1957	34.9	35.4	35.4	35.0	34.9	35.0	35.4	34.9	35.2	35.2	35.0	35.3	-
1958	34.7	34.6	34.6	34.5	34.6	34.5	34.3	34.6	34.4	34.5	34.6	34.6	-
1959	34.8	34.6	34.8	35.0	35.0	35.2	35.0	35.0	34.9	35.1	34.9	35.1	-
1960	34.9	35.1	34.5	35.7	35.8	36.2	35.8	35.7	36.1	35.3	35.7	35.6	-
1961	35.5	35.6	35.8	35.3	35.2	35.6	35.2	35.3	34.9	35.3	35.3	35.1	-
1962	35.4	35.6	35.5	35.5	35.5	35.6	35.4	35.8	35.9	35.6	35.5	35.4	-
1963	35.6	35.7	35.8	36.0	35.9	35.7	35.8	35.6	35.8	36.0	36.0	35.9	-
1964	35.9	36.3	36.2	36.7	36.6	36.5	36.2	36.4	36.2	36.2	36.3	36.4	-
1965	36.4	36.4	36.6	36.7	36.9	37.2	37.4	37.3	37.2	37.5	37.5	37.8	-
1966	37.8	37.7	37.7	37.9	37.9	38.1	38.2	38.5	38.7	38.8	39.2	39.0	-
1967	38.6	38.6	38.4	38.9	38.7	38.9	39.0	39.2	39.2	39.3	39.4	39.7	-
1968	38.9	39.3	39.5	39.4	40.0	39.9	39.7	39.5	39.8	39.7	39.9	39.9	-
1969	39.9	40.3	40.4	40.5	40.4	40.8	40.9	40.9	40.8	41.1	41.0	41.2	-
1970	41.1	41.0	41.0	41.2	40.6	40.7	40.9	40.8	40.5	40.7	40.5	40.4	-
1971	40.6	40.4	40.2	40.2	40.2	39.9	40.0	40.3	40.4	40.5	40.7	40.8	-
1972	40.8	40.8	41.0	40.9	41.0	40.9	40.9	41.0	40.9	40.9	41.1	41.3	-
1973	41.0	41.6	41.7	41.9	42.1	42.3	42.1	42.1	42.2	42.4	42.6	42.5	-
1974	42.3	42.6	42.7	42.7	42.6	42.7	43.0	42.8	42.7	42.6	42.3	42.1	-
1975	42.0	41.7	41.7	41.8	41.9	41.9	42.1	42.2	42.2	42.3	42.2	42.4	-
1976	42.7	42.8	43.0	43.1	43.4	43.3	43.5	43.3	43.2	43.2	43.6	43.6	-
1977	43.6	43.8	44.0	44.2	44.6	44.4	44.4	44.6	44.8	44.8	45.1	45.3	-
1978	45.5	45.7	45.8	46.2	46.3	46.5	46.3	46.4	46.7	47.0	47.0	47.1	-
1979	47.1	47.3	47.5	47.1	47.2	47.2	47.5	47.3	47.6	47.7	47.9	48.0	-
1980	48.0	47.9	47.8	47.7	47.6	47.5	47.5	47.5	47.6	47.6	47.7	47.6	-
1981	47.8	48.0	48.1	48.3	48.4	48.1	48.1	48.1	47.5	47.9	47.9	47.6	-
1982	47.7	47.7	47.7	47.6	47.8	47.8	47.8	47.8	47.8	47.5	47.5	47.5	-
1983	47.5	47.5	47.5	47.6	47.5	47.7	48.0	48.4	48.7	48.5	48.7	48.8	-
1984	48.7	49.0	49.0	49.3	49.9	49.8	49.8	49.5	49.5	49.6	49.7	49.9	-
1985	50.1	50.3	50.5	50.4	50.3	50.1	50.2	50.3	50.6	50.7	50.8	50.9	-
1986	50.9	50.8	50.9	51.0	51.2	51.5	51.7	51.8	51.6	51.8	51.7	51.7	-
	51.8°	52.0											

CIVILIAN EMPLOYMENT-POPULATION RATIO - WHITE WORKERS

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL AVERAGE
ORIGINAL													
1980	59.7	59.7	59.9	59.8	59.9	60.4	60.7	60.3	59.8	60.2	60.0	59.8	60.0
1981	58.9	59.1	59.6	60.1	60.4	60.7	61.3	60.9	59.8	60.2	59.7	59.1	60.0
1982	58.0	58.1	58.4	58.6	59.2	59.6	59.9	59.6	58.9	58.8	58.5	58.1	58.8
1983	57.1	57.0	57.4	57.9	58.3	59.6	60.3	60.2	59.7	59.9	60.0	59.8	58.9
1984	58.8	59.0	59.5	60.0	60.6	61.6	61.9	61.2	60.7	60.9	60.8	60.7	60.5
1985	59.6	59.9	60.4	60.6	60.9	61.4	61.9	61.7	61.3	61.6	61.5	61.2	61.0
1986	60.4	60.1	60.6	60.9	61.3	62.3	62.7	62.6	61.8	62.0	61.9	61.7	61.5
	60.9	61.0											
SEASONALLY ADJUSTED													
1954	55.5	56.1	55.8	55.3	55.1	54.9	54.7	55.0	55.0	55.0	55.4	55.1	-
1955	55.6	55.8	55.7	56.1	56.1	56.1	56.7	57.0	56.8	57.0	57.1	57.3	-
1956	57.5	57.2	57.1	57.2	57.4	57.4	57.3	57.4	57.4	57.2	57.2	57.0	-
1957	56.9	57.2	57.3	56.9	56.8	57.0	57.2	56.7	56.7	56.6	56.3	56.4	-
1958	55.8	55.5	55.3	55.1	55.2	55.0	55.0	55.2	55.2	55.3	55.4	55.5	-
1959	55.6	55.5	55.8	56.1	56.0	56.0	56.1	55.9	55.8	55.9	55.5	56.1	-
1960	55.9	56.1	55.4	56.2	56.2	56.1	56.0	55.8	56.1	55.5	55.9	55.5	-
1961	55.5	55.3	55.5	55.2	55.1	55.5	55.1	55.2	54.9	55.1	55.4	55.2	-
1962	55.4	55.6	55.5	55.5	55.5	55.5	55.2	55.5	55.6	55.4	55.1	55.2	-
1963	55.1	55.1	55.2	55.3	55.2	55.2	55.3	55.2	55.4	55.5	55.3	55.2	-
1964	55.2	55.4	55.4	55.8	55.9	55.5	55.6	55.6	55.5	55.4	55.4	55.5	-
1965	55.6	55.7	55.8	55.8	56.0	56.0	56.3	56.0	55.9	56.1	56.1	56.4	-
1966	56.5	56.4	56.4	56.5	56.6	56.7	56.7	56.9	56.8	57.0	57.3	57.2	-
1967	57.0	56.9	56.8	56.9	56.9	57.1	57.3	57.5	57.3	57.4	57.3	57.5	-
1968	56.9	57.2	57.3	57.3	57.7	57.7	57.6	57.5	57.5	57.4	57.6	57.6	-
1969	57.5	57.9	57.9	57.9	57.8	58.1	58.0	58.1	58.0	58.0	58.0	58.1	-
1970	58.0	57.9	58.0	57.9	57.5	57.3	57.4	57.3	57.1	57.2	57.0	56.9	-
1971	57.0	56.8	56.6	56.8	56.8	56.4	56.7	56.8	56.8	56.9	57.0	57.1	-
1972	57.2	57.1	57.3	57.2	57.3	57.3	57.3	57.5	57.4	57.4	57.5	57.7	-
1973	57.4	57.8	58.1	58.1	58.1	58.4	58.3	58.1	58.3	58.5	58.6	58.5	-
1974	58.5	58.6	58.6	58.4	58.4	58.4	58.5	58.3	58.2	58.1	57.8	57.5	-
1975	57.0	56.7	56.6	56.5	56.6	56.5	56.7	56.8	56.7	56.7	56.6	56.7	-
1976	57.1	57.3	57.3	57.5	57.6	57.5	57.7	57.7	57.6	57.6	57.6	57.7	-
1977	57.7	58.0	58.2	58.4	58.6	58.6	58.6	58.8	58.8	59.0	59.3	59.4	-
1978	59.5	59.5	59.5	59.8	59.9	60.3	60.0	60.1	60.1	60.3	60.4	60.5	-
1979	60.7	60.9	60.7	60.5	60.5	60.6	60.7	60.4	60.7	60.6	60.6	60.9	-
1980	60.8	60.8	60.6	60.2	60.0	59.7	59.6	59.5	59.7	59.8	59.8	59.9	-
1981	60.0	60.2	60.2	60.4	60.5	60.0	60.1	60.1	59.6	59.8	59.5	59.2	-
1982	59.1	59.2	59.1	59.0	59.3	58.9	58.8	58.8	58.7	58.5	58.3	58.2	-
1983	58.2	58.1	58.1	58.3	58.4	58.9	59.1	59.3	59.5	59.5	59.8	60.0	-
1984	59.9	60.1	60.2	60.3	60.7	60.9	60.7	60.4	60.5	60.6	60.6	60.8	-
1985	60.7	61.0	61.1	61.0	61.0	60.6	60.8	60.8	61.1	61.2	61.3	61.3	-
1986	61.4	61.2	61.3	61.3	61.4	61.6	61.6	61.8	61.6	61.7	61.7	61.8	-
	61.9	62.0											

CIVILIAN EMPLOYMENT-POPULATION RATIO - WHITE MEN 16 YEARS AND OVER

	JAN.	FEB.	MAR	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL AVERAGE
ORIGINAL													
1980	72.9	73.0	73.1	73.0	73.3	74.6	75.1	74.5	73.0	73.3	72.8	72.5	73.4
1981	71.4	71.3	72.0	72.8	73.3	74.3	75.4	74.7	72.9	72.7	71.9	71.0	72.8
1982	69.7	69.6	69.9	70.4	71.4	72.1	72.6	72.2	70.6	70.4	69.6	69.0	70.6
1983	67.8	67.6	68.2	68.9	69.8	72.0	73.0	72.6	71.2	71.3	71.2	70.9	70.4
1984	69.8	70.0	70.7	71.3	72.2	74.1	74.5	73.9	72.7	72.5	72.2	71.8	72.1
1985	70.5	70.5	71.2	71.8	72.6	73.4	74.1	73.9	72.7	72.7	72.3	71.7	72.3
1986	71.0	70.6	71.1	71.7	72.2	73.6	74.2	74.0	72.6	72.4	72.3	72.0	72.3
	70.9	71.0											
SEASONALLY ADJUSTED													
1954	82.6	82.7	82.0	81.5	81.3	81.1	81.0	81.1	80.9	81.0	81.3	81.2	-
1955	81.6	81.8	81.8	81.8	82.1	81.8	82.3	82.4	82.6	82.7	82.8	82.9	-
1956	83.4	83.0	83.0	82.9	82.7	82.7	82.6	82.7	82.5	82.4	82.3	82.2	-
1957	82.1	82.4	82.6	82.1	82.0	82.3	82.1	81.7	81.5	81.3	80.7	80.6	-
1958	80.0	79.5	79.0	78.8	79.0	78.8	78.8	79.0	79.2	79.5	79.3	79.3	-
1959	79.4	79.5	79.9	80.4	80.2	80.1	80.4	80.0	79.9	79.8	79.2	80.2	-
1960	80.1	80.2	79.3	80.0	79.8	79.4	79.2	79.1	79.2	78.8	79.1	78.6	-
1961	78.5	78.1	78.3	77.9	77.8	78.3	78.0	78.3	78.0	78.2	78.5	78.5	-
1962	78.5	78.8	78.8	78.5	78.7	78.5	78.1	78.3	78.3	78.3	77.7	77.9	-
1963	77.6	77.5	77.6	77.6	77.5	77.8	77.9	77.8	78.1	77.8	77.7	77.5	-
1964	77.5	77.6	77.5	77.9	78.1	77.6	78.0	77.8	77.9	77.6	77.8	77.7	-
1965	77.7	77.9	77.9	78.0	78.2	77.8	78.2	77.9	77.8	77.9	77.9	78.2	-
1966	78.2	78.1	78.3	78.4	78.2	78.5	78.2	78.3	78.1	78.3	78.4	78.4	-
1967	78.5	78.4	78.3	78.2	78.3	78.4	78.7	78.8	78.5	78.5	78.3	78.3	-
1968	77.9	78.2	78.1	78.3	78.4	78.5	78.6	78.6	78.2	78.2	78.1	78.4	-
1969	78.2	78.4	78.3	78.3	78.1	78.1	78.0	78.3	78.2	77.9	78.0	77.9	-
1970	77.7	77.6	77.7	77.4	77.2	76.7	76.6	76.3	76.3	76.1	76.1	75.9	-
1971	75.8	75.7	75.4	75.8	75.9	75.5	75.8	75.8	75.6	75.6	75.7	75.7	-
1972	75.7	75.6	75.8	75.8	75.8	76.0	76.0	76.2	76.1	76.0	76.1	76.3	-
1973	76.0	76.3	76.7	76.4	76.2	76.6	76.7	76.3	76.4	76.6	76.6	76.6	-
1974	76.7	76.7	76.5	76.1	76.3	76.2	75.8	75.7	75.7	75.5	75.2	74.5	-
1975	73.7	73.4	73.2	73.0	73.0	72.7	72.9	73.0	72.8	72.7	72.6	72.7	-
1976	73.0	73.3	73.3	73.6	73.5	73.3	73.4	73.6	73.3	73.4	73.2	73.3	-
1977	73.3	73.5	73.6	73.9	74.0	74.2	74.2	74.3	74.2	74.6	74.8	74.9	-
1978	74.8	74.7	74.6	75.0	75.1	75.4	75.0	75.2	74.8	74.9	75.3	75.1	-
1979	75.5	75.7	75.3	75.2	75.1	75.2	75.1	74.7	74.8	74.6	74.6	74.8	-
1980	74.6	74.9	74.4	73.7	73.4	73.0	72.8	72.7	72.7	72.9	72.9	73.1	-
1981	73.1	73.2	73.3	73.5	73.3	72.8	73.1	72.9	72.6	72.4	72.0	71.6	-
1982	71.4	71.5	71.2	71.0	71.4	70.6	70.3	70.4	70.3	70.1	69.8	69.6	-
1983	69.5	69.4	69.3	69.5	69.8	70.6	70.8	70.8	70.9	71.0	71.4	71.6	-
1984	71.5	71.7	71.8	71.9	72.1	72.7	72.4	72.1	72.3	72.3	72.3	72.4	-
1985	72.2	72.2	72.4	72.4	72.6	72.0	72.1	72.1	72.4	72.5	72.4	72.3	-
1986	72.6	72.3	72.2	72.2	72.1	72.2	72.1	72.3	72.3	72.2	72.4	72.6	-
	72.5	72.7											

[illegible] EMPLOYMENT-POPULATION RATIO - WHITE WOMEN 16 YEARS AND OVER

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL AVERAGE
[illegible]													
1980	47.7	47.7	47.9	47.9	47.6	47.5	47.6	47.4	47.8	48.3	48.4	48.3	47.8
1981	47.5	47.9	48.3	48.5	48.6	48.3	48.4	48.4	47.9	48.8	48.7	48.3	48.3
1982	47.4	47.6	47.9	48.0	48.1	48.2	48.4	48.2	48.3	48.3	48.4	48.2	48.1
1983	47.4	47.4	47.7	47.9	47.8	48.3	48.7	48.9	49.2	49.5	49.8	49.7	48.5
1984	48.6	49.0	49.3	49.6	50.1	50.1	50.4	49.7	49.8	50.3	50.4	50.5	49.8
1985	49.7	50.2	50.5	50.4	50.2	50.3	50.7	50.5	50.9	51.4	51.6	51.5	50.7
1986	50.6	50.5	51.0	51.1	51.3	51.9	52.3	52.1	51.9	52.5	52.4	52.4	51.7
	51.5	51.7											
SEASONALLY ADJUSTED													
1954	30.9	31.9	32.1	31.5	31.3	31.1	30.9	31.3	31.5	31.5	31.9	31.5	-
1955	32.1	32.2	32.1	32.7	32.4	32.7	33.4	33.9	33.4	33.6	33.7	34.0	-
1956	34.0	33.7	33.6	33.9	34.3	34.4	34.3	34.4	34.5	34.4	34.3	34.2	-
1957	34.0	34.4	34.3	34.0	33.8	34.1	34.6	34.0	34.3	34.3	34.2	34.3	-
1958	33.7	33.7	33.8	33.6	33.7	33.5	33.4	33.6	33.5	33.4	33.6	33.8	-
1959	34.0	33.7	33.9	34.0	34.0	34.2	34.1	34.1	34.0	34.3	33.9	34.2	-
1960	33.9	34.2	33.8	34.7	34.9	35.0	34.9	34.7	35.1	34.3	34.8	34.6	-
1961	34.7	34.7	35.0	34.6	34.5	34.8	34.3	34.4	34.1	34.3	34.5	34.3	-
1962	34.6	34.7	34.7	34.7	34.7	34.8	34.6	35.0	35.1	34.7	34.7	34.7	-
1963	34.7	34.9	35.0	35.2	35.1	34.9	35.0	34.8	35.0	35.3	35.1	35.0	-
1964	35.1	35.4	35.5	35.9	35.9	35.6	35.4	35.5	35.3	35.3	35.2	35.5	-
1965	35.7	35.7	35.8	35.9	36.1	36.4	36.6	36.3	36.2	36.6	36.6	36.9	-
1966	37.0	36.8	36.8	37.0	37.2	37.2	37.4	37.7	37.9	37.9	38.5	38.3	-
1967	37.8	37.8	37.7	38.1	38.0	38.2	38.3	38.5	38.6	38.6	38.7	38.9	-
1968	38.3	38.6	38.8	38.7	39.2	39.3	39.0	38.8	39.1	39.0	39.3	39.2	-
1969	39.2	39.6	39.7	39.9	39.9	40.3	40.3	40.2	40.2	40.4	40.4	40.5	-
1970	40.5	40.5	40.5	40.6	40.0	40.1	40.4	40.3	40.0	40.3	40.1	40.0	-
1971	40.3	40.0	39.7	39.7	39.7	39.4	39.5	39.8	39.9	40.0	40.3	40.5	-
1972	40.5	40.5	40.6	40.6	40.7	40.5	40.6	40.8	40.7	40.7	40.8	40.9	-
1973	40.8	41.2	41.4	41.6	41.8	42.1	41.8	41.8	42.0	42.2	42.4	42.2	-
1974	42.0	42.3	42.5	42.5	42.4	42.4	42.9	42.5	42.4	42.4	42.2	42.1	-
1975	42.0	41.6	41.7	41.7	41.7	41.8	42.0	42.1	42.2	42.2	42.2	42.3	-
1976	42.7	42.7	42.8	42.9	43.3	43.3	43.5	43.3	43.3	43.3	43.5	43.7	-
1977	43.6	43.9	44.1	44.3	44.6	44.5	44.5	44.6	44.8	44.9	45.3	45.2	-
1978	45.5	45.6	45.7	46.1	46.2	46.5	46.4	46.3	46.7	47.1	47.0	47.1	-
1979	47.2	47.4	47.4	47.2	47.3	47.3	47.6	47.4	47.8	47.8	47.9	48.1	-
1980	48.2	48.0	48.0	47.9	47.7	47.6	47.6	47.5	47.8	47.8	47.9	47.8	-
1981	48.0	48.3	48.4	48.5	48.7	48.4	48.4	48.5	47.8	48.3	48.2	47.9	-
1982	48.0	48.0	48.1	48.1	48.3	48.3	48.3	48.3	48.2	47.9	47.9	47.8	-
1983	47.9	47.8	47.9	48.0	48.0	48.2	48.5	48.9	49.1	49.1	49.3	49.4	-
1984	49.2	49.5	49.5	49.7	50.3	50.0	50.1	49.7	49.7	49.8	49.9	50.1	-
1985	50.3	50.7	50.8	50.6	50.5	50.3	50.4	50.5	50.8	51.0	51.1	51.1	-
1986	51.2	51.0	51.2	51.3	51.5	51.9	52.0	52.2	51.9	52.0	51.9	52.0	-
	52.1	52.2											

CIVILIAN EMPLOYMENT-POPULATION RATIO - BLACK WORKERS	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NÒV.	DEC.	ANNUAL AVERAGE
ORIGINAL													
1980	52.1	52.0	51.9	51.8	52.0	52.2	53.4	53.3	51.9	52.3	52.2	51.9	52.3
1981	51.1	50.6	51.1	51.9	51.8	51.4	52.5	51.7	51.1	51.3	51.2	50.5	51.3
1982	49.5	49.1	49.0	48.8	49.4	49.6	50.8	50.7	49.3	49.1	49.2	48.8	49.4
1983	47.8	48.3	48.4	48.3	48.9	49.6	51.3	50.8	50.3	49.9	50.5	50.2	49.5
1984	49.6	50.7	50.6	50.7	52.1	52.9	53.4	53.9	53.1	53.2	53.8	53.4	52.3
1985	52.5	51.8	52.5	52.9	53.2	54.2	54.6	54.8	53.4	53.5	53.4	53.9	53.4
1986	53.1	52.8	53.5	53.9	54.5	54.8	55.4	54.3	53.8	54.3	54.4	54.5	54.1
SEASONALLY ADJUSTED													
1972	53.0	53.2	53.7	53.8	53.9	54.4	53.5	53.6	53.6	53.2	54.1	54.4	-
1973	53.7	54.6	54.7	54.3	53.9	53.9	54.8	54.7	54.4	55.1	54.9	54.9	-
1974	55.1	54.5	53.6	54.0	54.1	53.6	53.4	53.4	53.5	53.3	52.1	51.4	-
1975	50.9	50.4	50.1	49.6	50.0	50.1	50.3	50.0	50.1	49.9	50.0	50.0	-
1976	50.5	50.5	51.1	51.3	51.1	50.5	50.5	50.9	50.6	50.5	51.2	51.0	-
1977	51.0	51.2	51.2	51.7	51.4	51.7	51.0	51.2	51.2	51.1	51.5	52.9	-
1978	52.7	53.2	53.4	53.4	53.6	53.9	53.5	53.7	54.2	54.2	53.8	53.8	-
1979	53.6	53.5	54.0	53.5	53.4	53.9	54.1	53.7	54.1	54.1	53.8	53.7	-
1980	53.3	53.1	52.7	52.4	52.2	51.8	52.0	52.1	51.8	51.9	51.9	51.8	-
1981	52.2	51.7	51.9	52.5	52.0	51.0	51.1	50.5	50.9	51.0	50.9	50.5	-
1982	50.5	50.2	49.8	49.4	49.5	49.2	49.4	49.5	49.2	48.9	49.0	48.8	-
1983	48.8	49.3	49.1	48.9	48.9	49.2	49.9	49.7	50.2	49.8	50.3	50.3	-
1984	50.6	51.8	51.3	51.2	52.1	52.4	52.0	52.9	53.0	53.1	53.6	53.5	-
1985	53.5	52.9	53.2	53.4	53.1	53.6	53.3	53.9	53.4	53.5	53.2	53.9	-
1986	54.1	53.9	54.2	54.3	54.3	54.2	54.1	53.5	53.8	54.2	54.2	54.4	-

CIVILIAN EMPLOYMENT-POPULATION RATIO - BLACK MEN 16 YEARS AND OVER	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL AVERAGE
ORIGINAL													
1980	59.9	59.7	60.1	60.0	60.3	61.0	61.9	61.6	59.8	60.6	60.2	59.6	60.4
1981	58.4	57.9	59.1	59.6	60.4	59.5	60.7	60.1	59.3	58.9	57.8	57.1	59.1
1982	55.4	55.4	55.6	55.8	56.4	56.6	58.2	57.8	55.5	55.3	55.7	54.1	56.0
1983	53.3	53.6	54.3	54.5	55.0	57.2	58.8	58.1	57.2	57.3	58.3	57.5	56.3
1984	56.5	57.6	57.3	57.0	59.3	59.9	60.5	61.4	60.2	60.3	60.8	59.5	59.2
1985	58.3	57.8	58.4	58.9	59.9	61.1	62.1	62.9	60.6	60.0	59.7	59.7	60.0
1986	59.2	58.7	59.7	60.1	61.5	62.0	62.7	61.5	60.1	60.3	60.5	60.8	60.6
SEASONALLY ADJUSTED													
1972	65.1	65.7	66.7	67.1	67.0	68.5	66.8	67.2	66.8	66.6	66.8	67.2	-
1973	66.7	67.8	68.0	67.5	67.0	67.1	67.4	67.4	67.2	68.0	67.9	68.3	-
1974	68.6	67.6	67.0	66.6	6[illegible].6	65.7	65.6	65.2	64.8	65.3	64.1	63.0	-
1975	62.1	61.4	60.6	59.7	60.4	60.1	60.8	60.7	60.7	60.2	60.1	59.7	-
1976	60.2	60.1	60.0	60.9	60.9	59.9	60.5	61.1	60.8	60.6	60.9	61.2	-
1977	61.5	61.8	61.7	62.3	60.9	62.0	61.1	60.8	60.3	60.6	61.6	62.6	-
1978	62.5	62.8	63.3	63.2	6[illegible].3	63.5	63.7	62.6	63.6	63.8	63.5	63.5	-
1979	63.2	63.1	63.2	62.9	63.4	63.8	63.9	64.2	64.4	63.7	62.9	62.6	-
1980	61.9	61.6	61.3	60.9	60.3	59.8	59.9	59.7	59.5	60.0	60.1	59.9	-
1981	60.3	59.8	60.2	60.3	60.5	58.4	58.7	58.2	58.9	58.4	57.5	57.5	-
1982	57.1	57.2	56.8	56.6	56.4	55.5	56.1	56.0	55.1	55.0	55.5	54.6	-
1983	55.0	55.3	55.4	55.2	54.9	56.1	56.7	56.4	56.9	57.1	58.0	58.0	-
1984	58.1	59.4	58.5	57.7	59.2	58.7	58.4	59.7	59.9	60.2	60.6	60.0	-
1985	59.9	59.6	59.5	59.6	59.6	59.9	60.0	61.3	60.4	60.0	59.5	60.1	-
1986	60.8	60.4	60.9	60.9	61.1	60.7	60.6	59.9	60.0	60.3	60.4	61.2	-

611.

CIVILIAN EMPLOYMENT-POPULATION RATIO - BLACK WOMEN 16 YEARS AND OVER

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL AVERAGE
ORIGINAL													
1980	45.9	45.8	45.3	45.1	45.3	45.1	46.5	46.6	45.6	45.7	45.8	45.7	45.7
1981	45.3	44.7	44.7	45.7	44.8	44.8	45.8	45.0	44.6	45.2	45.9	45.3	45.1
1982	44.8	44.0	43.7	43.1	43.8	44.0	44.9	45.0	44.4	44.1	44.0	44.5	44.2
1983	43.4	44.0	43.6	43.3	44.0	43.6	45.2	44.9	44.8	44.0	44.3	44.4	44.1
1984	44.0	45.2	45.2	45.7	46.3	47.2	47.6	47.9	47.4	47.5	48.1	48.5	46.7
1985	47.9	47.0	47.8	48.1	47.9	48.5	48.6	48.2	47.6	48.3	48.3	49.2	48.1
1986	48.1	48.0	48.5	48.9	48.9	48.9	49.4	48.5	48.6	49.4	49.4	49.4	48.8
SEASONALLY ADJUSTED													
1972	43.1	42.9	42.9	43.0	43.2	42.9	42.6	42.4	42.7	42.3	43.7	43.9	-
1973	43.1	43.8	43.8	43.5	43.3	43.1	44.5	44.4	43.9	44.4	44.2	44.0	-
1974	44.0	43.9	42.9	43.7	43.9	43.8	43.6	43.9	44.3	43.5	42.3	42.0	-
1975	41.8	41.4	41.6	41.4	41.5	42.0	41.7	41.4	41.4	41.6	41.8	42.1	-
1976	42.6	42.6	43.8	43.4	43.1	42.8	42.4	42.5	42.3	42.2	43.3	42.7	-
1977	42.5	42.5	42.8	43.1	43.7	43.3	42.9	43.5	43.8	43.5	43.3	45.0	-
1978	44.8	45.4	45.4	45.6	45.7	46.1	45.3	46.6	46.7	46.5	46.0	46.0	-
1979	45.8	45.8	46.6	45.9	45.4	45.8	46.3	45.3	45.9	46.4	46.5	46.6	-
1980	46.4	46.3	45.8	45.6	45.7	45.4	45.7	46.0	45.7	45.4	45.3	45.2	-
1981	45.7	45.2	45.2	46.3	45.2	45.1	45.0	44.3	44.6	45.0	45.6	44.9	-
1982	45.2	44.5	44.2	43.7	44.0	44.2	44.0	44.3	44.4	44.0	43.8	44.1	-
1983	43.8	44.5	44.0	43.8	44.1	43.7	44.4	44.3	44.8	43.9	44.2	44.1	-
1984	44.4	45.7	45.5	46.0	46.3	47.2	46.9	47.4	47.5	47.4	48.0	48.1	-
1985	48.4	47.5	48.1	48.3	47.9	48.5	47.9	47.8	47.7	48.2	48.1	48.8	-
1986	48.5	48.6	48.7	48.9	48.9	48.8	48.8	48.3	48.9	49.3	49.2	49.0	-

Senator SARBANES. Well, why don't you give me what you have now? What do you have for the black population?

Mrs. NORWOOD. The black population, of course, has a much lower employment-population ratio than the white. Overall, it's 54.5. For adult men, it is 65.7. For adult women, it is 52.0; and for teenagers, it is 24.2.

Senator SARBANES. What is the figure for white teenagers? You didn't give me that before.

Mrs. NORWOOD. For white teenagers, it is 49.2. There is an enormous difference in the EP ratios of black and white teenagers.

Senator SARBANES. Yes, a difference of 49.2 versus 24.2.

Mrs. NORWOOD. That's right. I think it's important in analyzing what's going on with the minority population to look both at the unemployment rate and at the employment-population ratio. What that shows, of course, is that there are many fewer black youngsters with jobs. It is true, of course, that their unemployment rates are also much higher than the unemployment rates for whites, but I think the EP ratios show their labor market problems somewhat more dramatically.

Senator SARBANES. There is also a very significant difference between white adult males and black adult males?

Mrs. NORWOOD. Yes, that's been traditional.

Senator SARBANES. Of roughly 75 percent versus 65 percent, it that correct?

Mrs. NORWOOD. Yes.

Senator SARBANES. Women is about the same?

Mrs. NORWOOD. Yes. What's happened there is rather interesting. In the past white women had lower employment-population ratios. As they have moved into the work force in such large numbers, they have caught up with the employment-population ratios of black women who have always worked. The black men, however, and black teenagers still have very much lower employment-population ratios than whites.

Senator SARBANES. So just over half of all women 20 and older—these are adult women—are working, although the definition of working would be even a couple hours a week?

Mrs. NORWOOD. That's correct.

Senator SARBANES. What figures do you have on the Hispanic population?

Mrs. NORWOOD. For the Hispanics, all we have right now here is a 59.6 overall employment-population ratio. We can supply breakdowns of that for the record.

[The following information was subsequently supplied for the record:]

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SPANISH TABLES FOR JAN87                                                                                  DATE 020287        PAGE

                  TABLE 58.--EMPLOYMENT STATUS OF THE CIVILIAN NONINSTITUTIONAL POPULATION BY AGE AND SEX     #TABLE 58.

                      CIV          CIVILIAN LABOR FORCE                                    NOT IN LABOR FORCE
                     NONIN TOTAL      EMPLOYED         UNEMPLOYED         KEEP-  GOING  UN-                    OTHER
  AGE AND SEX        POP          TOTAL AGRIC  NON-  TOTAL RATE   TOTAL  ING    TO    ABLE   UNPD 1-14 HRS.       ALL OTHER
 MONTH...JAN 1987                              AGRIC                     HOUSE  SCH    TO   TOTAL AGRIC  NON-  TOTAL FARM  NON-
                                                                                      WORK              AGRIC        RES.  FARM

ALL SPANISH
BOTH
   16+ YEARS         12653  8310  7357   361  6997   953  11.5  4343  2397   776   193   977     0     5   972     0   972
16-19 YRS             1323   549   417    14   403   132  24.0   776   116   576     3    79     0     2    77     0    77
 16 AND 17             661   185   133     1   132    52  27.9   476    33   419     1    22     0     2    20     0    20
 18 AND 19             663   364   284    13   271    80  22.0   298    83   156     2    57     0     0    57     0    57
20+ YEARS            11330  7761  6940   347  6594   821  10.6  3569  2281   201   189   898     0     3   895     0   896
 20-24 YRS            1878  1405  1199    87  1112   206  14.7   474   291   113     5    65     0     0    65     0    65
 25-34 YRS            3763  2918  2594   104  2490   324  11.1   845   676    60    24    85     0     0    85     0    85
 35-44 YRS            2293  1782  1634    66  1568   148   8.3   511   412    12    31    57     0     0    57     0    57
 45-54 YRS            1486  1060   970    58   913    89   8.4   427   313    11    33    70     0     3    67     0    67
 55-64 YRS            1006   512   470    23   447    41   8.1   494   294     5    52   143     0     0   143     0   143
  55-59 YRS            528   302   271    14   257    31  10.2   227   142     2    28    54     0     0    54     0    54
  60-64 YRS            477   210   200    10   190    11   5.1   267   152     3    24    89     0     0    89     0    89
65+ YEARS              904    85    73     9    63    13  15.0   818   295     0    44   479     0     0   479     0   479
16-21 YRS             2059  1082   860    45   815   222  20.5   977   223   643     6   105     0     2   102     0   102
 MAJ ACT,SCH           862   219   158     3   156    61  27.7   643     0   643     0     0     0     0     0     0     0
 OTHER                1196   863   702    42   660   161  18.7   334   223     0     6   105     0     2   102     0   102
25-59 YEARS           8071  6061  5470   241  5228   591   9.8  2010  1543    84   117   266     0     3   263     0   263
45+ YEARS             3396  1657  1513    91  1423   143   8.6  1739   903    16   129   692     0     3   689     0   689

ALL SPANISH
MALE
   16+ YEARS          6262  5114  4518   328  4190   596  11.7  1148    61   370   110   607     0     1   605     0   605
16-19 YRS              667   321   252    15   237    68  21.3   346     7   284     3    52     0     1    51     0    51
 16 AND 17             340    99    82     3    79    17  17.4   241     4   220     1    16     0     1    14     0    14
 18 AND 19             326   222   170    13   158    51  23.1   105     3    63     2    36     0     0    36     0    36
20+ YEARS             5596  4793  4266   312  3953   528  11.0   802    54    86   107   555     0     0   555     0   555
 20-24 YRS             961   849   733    83   650   116  13.6   113     5    57     4    47     0     0    47     0    47
 25-34 YRS            1920  1834  1622    91  1531   212  11.5    86     6    18    19    43     0     0    43     0    43
 35-44 YRS            1156  1082   982    57   925   101   9.3    74    12     0    23    39     0     0    39     0    39
 45-54 YRS             710   634   579    53   525    55   8.7    77     5     9    16    46     0     0    46     0    46
 55-64 YRS             463   335   302    22   280    32   9.6   129    11     3    21    94     0     0    94     0    94
  55-59 YRS            229   183   161    13   148    22  11.9    46     8     0    11    28     0     0    28     0    28
  60-64 YRS            234   152   141    10   132    11   6.9    83     3     3    10    67     0     0    67     0    67
65+ YEARS              385    60    48     6    42    12  19.8   324    14     0    24   286     0     0   286     0   286
16-21 YRS             1022   634   511    46   464   123  19.5   388     7   314     6    62     0     1    60     0    60
 MAJ ACT,SCH           430   116    88     3    85    29  24.6   314     0   314     0     0     0     0     0     0     0
 OTHER                 592   518   423    43   379    95  18.3    75     7     0     6    62     0     1    60     0    60
25-59 YEARS           4015  3733  3343   214  3129   390  10.4   282    32    26    69   155     0     0   155     0   156
45+ YEARS             1558  1029   929    82   847   100   9.7   530    31    12    61   427     0     0   427     0   427
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SPANISH TABLES FOR JAN87                                                                                  DATE 020287       PAGE    2

               TABLE 58.--EMPLOYMENT STATUS OF THE CIVILIAN NONINSTITUTIONAL POPULATION BY AGE AND SEX     #TABLE 58.

                       CIV         CIVILIAN LABOR FORCE                                      NOT IN LABOR FORCE
                      NONIN TOTAL     EMPLOYED          UNEMPLOYED           KEEP- GOING  UN-                   OTHER
  AGE AND SEX          POP        TOTAL AGRIC  NON-  TOTAL RATE   TOTAL  ING    TO    ABLE   UNPD 1-14 HRS.         ALL OTHER
 NORTH...JAN 1987                              AGRIC                     HOUSE  SCH    TO    TOTAL AGRIC  NON-  TOTAL FARM  NON-
                                                                                      WORK               AGRIC        RES.  FARM

ALL SPANISH
FEMALE
   16+ YEARS          6391  3196  2839    33  2807   357  11.2   3195  2336   406    82   370     0     4   367     0   367
16-19 YRS              657   228   165    -0   166    64  27.9    428   110   292     0    27     0     1    26     0    26
 16 AND 17             320    86    51    -0    52    34  40 2    235    30   199     0     6     0     1     5     0     5
 18 AND 19             336   143   114     0   114    29  20.4    194    80    93     0    21     0     0    21     0    21
20+ YEARS             5734  2968  2675    34  2640   293   9.9   2767  2227   114    82   344     0     3   341     0   341
 20-24 YRS             917   556   466     4   462    90  16.2    361   286    56     0    18     0     0    18     0    18
 25-34 YRS            1844  1084   972    13   959   112  10.3    760   669    42     5    43     0     0    43     0    43
 35-44 YRS            1136   700   652     9   643    47   6.7    437   399    12     8    18     0     0    18     0    18
 45-54 YRS             776   426   392     4   387    34   7.9    350   308     2    16    24     0     3    21     0    21
 55-64 YRS             542   177   168     1   167     9   5.1    365   283     2    32    49     0     0    49     0    49
  55-59 YRS            299   119   110     1   109     9   7.5    181   135     2    18    26     0     0    26     0    26
  60-64 YRS            243    58    58     0    58     0    .3    185   148     0    14    23     0     0    23     0    23
65+ YEARS              519    25    24     3    21     1   3.6    494   281     0    20   192     0     0   192     0   192
16-21 YRS             1036   448   350    -0   351    98  21.9    589   216   329     0    43     0     1    42     0    47
 MAJ ACT,SCH           432   103    71     0    71    32  31.2    329     0   329     0     0     0     0     0     0     0
 OTHER                 604   345   279    -0   280    66  19.2    259   216     0     0    43     0     1    42     0    42
25-59 YEARS           4056  2328  2126    27  2099   202   8.7   1727  1511    58    48   110     0     3   107     0   108
45+ YEARS             1838   628   584     9   576    44   7.0   1209   872     4    68   265     0     3   262     0   262
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Senator Sarbanes. You don't have a teenager figure with you?

Mrs. Norwood. No, not with us, but the employment-population ratio for the overall Hispanic population has gone up almost 2 full percentage points this year, and a large part of that at least, is a result of Hispanic women coming into the work force.

Senator Sarbanes. Are they the three groups on which you maintain figures?

Mrs. Norwood. Yes.

Senator Sarbanes. The white population, the black population, and the Hispanic population?

Mrs. Norwood. That's correct. We don't have as much data as we would like to have on the Hispanic population. We have been working very hard to try to improve that and we did introduce some improvements in the Hispanic population data at the beginning of last year.

Senator Sarbanes. Do you do anything to identify the profile of the percentage of these populations that do not have jobs? In other words, as I understand it, 25 percent of all all white males 20 or over do not have employment, according to your figures?

Mrs. Norwood. That's correct.

Senator Sarbanes. 35 percent of all black males 20 or over do not have jobs. Do you have any profile of that 25 percent of the white adult males or the 35 percent of the black adult males?

Mrs. Norwood. We don't have any specific studies that respond to exactly that question. Obviously, these people are either unemployed or they are not in the labor force at all.

Senator Sarbanes. Yes. For instance, how many of them would be over 70 years old or over 65 years old?

Mrs. Norwood. We could provide information of that sort for the record. I don't have it here. We do know that the discouraged workers, those are not looking for work because they don't think any is available, are disproportionately minority and they are disproportionately women. We can easily take a look at the age distribution and anything else that we think would be useful.

Senator Sarbanes. Could you work on that a bit?

Mrs. Norwood. Sure.

[The information referred to follows:]

CPS BASE TABLES JAN87 DATE 020287 PAGE 57

TA^LE 8.--EMPLOYMENT STATUS OF THE CIVILIAN NONINSTITUTIONAL POPULATION 55 YEARS OF AGE AND OVER, BY AGE AND SEX

020287=TB 8

AGE AND SEX	CIV NONIN POP	CIVILIAN LABOR FORCE						NOT IN LABOR FORCE									
		TOTAL	EMPLOYED			UNEMPLOYED		TOTAL	KEEP-ING HOUSE	GOING TO SCH	UN-ABLE TO WORK	OTHER					
			TOTAL	AGRIC	NON-AGRIC	TOTAL	RATE					TOTAL	UNPD 1-14 HRS.		ALL OTHER		
													AGRIC	NON-AGRIC	TOTAL	FARM RES.	NON-FARM
TOTAL MALE																	
55+ YEARS	21812	8707	8357	534	7823	350	4.0	13105	292	10	851	11952	0	2	11950	253	11697
55 YEARS	1006	858	834	17	817	24	2.8	148	2	0	23	122	0	0	122	0	122
56 YEARS	1122	905	865	43	822	41	4.5	216	14	0	48	154	0	0	154	6	148
57 YEARS	1064	853	807	30	777	46	5.4	211	10	3	55	164	0	0	164	1	163
58 YEARS	1031	789	736	39	696	53	6.7	243	7	0	38	199	0	0	199	2	196
59 YEARS	1069	791	762	32	730	30	3.7	278	7	0	63	209	0	0	209	4	205
60 YEARS	1016	728	684	37	646	44	6.1	288	11	4	51	222	0	0	222	3	219
61 YEARS	1063	693	669	28	642	24	3.4	370	13	0	40	317	0	0	317	8	309
62 YEARS	1021	543	519	44	475	24	4.3	478	13	0	53	412	0	0	412	5	407
63 YEARS	923	426	411	23	388	15	3.5	497	12	0	38	446	0	0	446	4	442
64 YEARS	955	398	389	27	363	8	2.0	598	13	0	43	542	0	0	542	7	535
65 YEARS	1015	304	293	19	274	10	3.4	711	11	0	38	662	0	0	662	9	653
66 YEARS	924	234	229	28	201	5	2.0	690	6	0	26	659	0	2	657	12	645
67 YEARS	873	190	184	20	164	6	3.0	683	10	0	33	641	0	0	641	9	632
68 YEARS	796	168	164	22	143	4	2.1	628	22	0	24	582	0	0	582	14	568
69 YEARS	759	138	134	17	117	4	2.9	621	14	0	19	588	0	0	588	11	577
70 YEARS	758	116	115	22	93	1	1.2	642	5	0	28	609	0	0	609	14	594
71 YEARS	715	103	104	11	93	-0	-.5	612	7	0	22	583	0	0	583	13	570
72 YEARS	631	89	81	19	61	8	9.0	542	10	0	25	508	0	0	507	9	498
73 YEARS	557	77	75	12	63	3	3.3	479	7	0	8	464	0	0	464	10	454
74 YEARS	554	65	63	11	52	1	2.2	490	14	0	13	463	0	0	463	11	452
75 AND OVER	3919	240	239	36	205	1	.4	3679	85	3	184	3408	0	0	3408	100	3308
TOTAL FEMALE																	
55+ YEARS	27969	6071	5895	107	5788	176	2.9	21898	14788	23	860	6227	1	19	6206	78	6129
55 YEARS	1189	665	637	5	632	28	4.1	524	421	9	18	77	0	1	75	0	76
56 YEARS	1192	646	626	4	621	20	3.1	547	434	2	26	84	0	1	83	3	80
57 YEARS	1136	590	576	13	562	14	2.4	545	434	0	23	88	0	0	88	0	88
58 YEARS	1140	530	515	9	507	15	2.8	610	492	-0	19	100	0	0	100	4	96
59 YEARS	1159	571	553	14	539	18	3.2	587	460	0	32	95	0	4	91	2	90
60 YEARS	1165	497	481	11	471	15	3.1	668	517	1	17	132	0	0	132	2	130
61 YEARS	1200	468	456	4	452	13	2.8	732	588	0	22	122	0	1	121	5	116
62 YEARS	1180	328	315	6	309	13	3.9	853	628	2	20	203	0	1	202	3	199
63 YEARS	1150	309	306	10	297	2	.7	841	615	1	25	201	0	3	198	5	194
64 YEARS	1101	275	271	0	271	5	1.7	825	558	1	22	245	0	2	242	0	243
65 YEARS	1264	208	203	3	199	5	2.4	1057	756	2	19	281	0	0	281	0	280
66 YEARS	1107	151	145	2	142	6	4.1	956	681	0	33	242	1	0	241	0	241
67 YEARS	963	131	126	4	122	6	4.3	832	554	0	27	251	0	2	249	7	241
68 YEARS	1009	139	135	5	130	5	3.3	870	594	1	11	264	0	0	264	4	260
69 YEARS	935	92	85	3	82	7	7.4	843	596	0	11	236	0	4	232	4	228
70 YEARS	987	98	98	2	96	0	-.3	889	611	0	21	257	0	0	257	4	253
71 YEARS	829	56	56	0	56	0	.5	773	516	0	19	237	0	0	237	4	233
72 YEARS	815	57	55	4	51	2	3.6	758	481	1	18	258	0	0	258	0	258
73 YEARS	884	42	42	0	42	0	.0	842	542	0	36	263	0	0	263	6	257
74 YEARS	787	32	30	1	29	2	5.3	755	479	1	28	251	0	0	251	5	247
75 AND OVER	6777	186	185	6	178	2	.8	6591	3836	4	412	2339	0	1	2338	19	2319

A-53. Persons not in the labor force by reason, sex, and race, seasonally adjusted

(In thousands)

Reason, sex, and race	1983	1984				1985				1986			
	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
TOTAL													
Total not in labor force	62,785	63,138	62,607	62,791	62,874	62,494	62,771	62,947	62,754	62,817	62,693	62,664	62,807
Do not want a job now	56,533	56,801	56,450	57,241	56,774	56,766	56,889	56,830	56,744	57,193	56,838	56,865	57,013
Current activity:													
Going to school	6,556	6,667	6,469	6,902	6,357	6,292	6,208	6,310	6,316	6,249	6,513	6,189	6,330
Ill, disabled	3,890	4,024	4,083	4,049	3,843	4,042	3,833	3,836	3,969	4,189	4,040	4,087	3,928
Keeping house	28,456	28,450	27,897	28,018	27,861	27,399	27,271	27,028	26,839	26,798	26,487	26,176	26,000
Retired	13,144	13,478	13,670	13,687	14,255	14,354	14,714	15,131	15,234	15,133	15,326	15,885	16,089
Other activity	4,487	4,182	4,331	4,585	4,458	4,679	4,863	4,525	4,386	4,826	4,471	4,528	4,666
Want a job now	6,192	6,254	6,018	5,917	6,041	5,880	5,808	6,020	5,961	5,789	5,882	5,980	5,808
Reason not looking:													
School attendance	1,535	1,536	1,626	1,478	1,483	1,446	1,460	1,417	1,483	1,416	1,379	1,578	1,427
Ill health, disability	806	744	822	809	819	763	813	780	854	835	898	903	746
Home responsibilities	1,358	1,483	1,219	1,449	1,347	1,231	1,265	1,395	1,360	1,365	1,311	1,203	1,347
Think cannot get a job[1]	1,422	1,348	1,300	1,211	1,272	1,253	1,170	1,230	1,158	1,107	1,119	1,150	1,127
Job-market factors	1,039	937	947	867	928	858	822	813	792	765	761	736	851
Personal factors	383	411	353	344	344	395	348	417	365	343	358	414	277
Other reasons[1]	1,071	1,142	1,051	969	1,120	1,186	1,100	1,197	1,107	1,065	1,175	1,145	1,160
Men													
Total not in labor force	19,583	19,806	19,734	19,776	19,814	19,921	20,011	20,136	20,155	20,225	20,347	20,460	20,454
Do not want a job now	17,511	17,656	17,640	17,895	17,801	18,059	17,972	18,093	18,143	18,350	18,441	18,382	18,454
Want a job now	2,111	2,072	2,034	1,918	1,986	1,936	2,006	2,003	1,995	1,940	1,948	2,087	2,028
Reason not looking:													
School attendance	824	814	803	717	744	692	732	667	709	726	667	824	680
Ill health, disability	356	363	362	383	386	362	348	361	401	364	471	438	359
Think cannot get a job	583	500	503	475	478	507	513	499	492	438	392	425	497
Other reasons[1]	349	395	365	343	380	375	414	477	393	412	418	399	490
Women													
Total not in labor force	43,202	43,333	42,872	43,016	43,060	42,573	42,761	42,810	42,599	42,593	42,346	42,204	42,354
Do not want a job now	39,022	39,145	38,810	39,346	38,973	38,707	38,917	38,737	38,601	38,843	38,396	38,482	38,559
Want a job now	4,081	4,182	3,984	3,999	4,055	3,943	3,802	4,016	3,966	3,849	3,933	3,893	3,782
Reason not looking:													
School attendance	711	722	823	761	740	754	728	749	774	690	711	754	747
Ill health, disability	450	381	459	426	433	401	465	420	453	471	426	465	387
Home responsibilities	1,358	1,483	1,219	1,449	1,347	1,231	1,265	1,395	1,360	1,365	1,311	1,203	1,347
Think cannot get a job	839	848	797	736	795	746	658	731	666	669	727	725	630
Other reasons	723	748	686	626	740	811	686	721	713	653	757	746	670
White													
Total not in labor force	53,653	54,115	53,606	53,894	53,854	53,601	53,807	53,837	53,688	53,767	53,674	53,511	53,584
Do not want a job now	49,107	49,594	49,341	49,593	49,514	49,219	49,641	49,426	49,317	49,506	49,387	49,208	49,367
Want a job now	4,530	4,472	4,255	4,212	4,367	4,373	4,245	4,430	4,382	4,265	4,352	4,288	4,217
Reason not looking:													
School attendance	1,092	1,068	1,120	1,014	1,042	1,054	1,010	1,026	1,052	994	975	1,065	975
Ill health, disability	605	580	561	587	592	551	580	598	604	625	618	625	536
Home responsibilities	1,003	1,071	882	1,063	1,027	942	1,003	1,036	1,009	1,020	1,032	886	975
Think cannot get a job	980	900	829	774	781	876	764	790	808	749	741	780	817
Other reasons[1]	850	853	862	774	926	948	888	980	910	878	985	931	914
Black													
Total not in labor force	7,434	7,305	7,387	7,252	7,230	7,235	7,313	7,332	7,317	7,274	7,230	7,423	7,405
Do not want a job now	5,964	5,854	5,850	5,772	5,748	5,901	5,934	5,948	5,930	5,947	5,937	6,027	6,020
Want a job now	1,495	1,585	1,531	1,446	1,485	1,354	1,383	1,332	1,397	1,353	1,299	1,425	1,423
Reason not looking:													
School attendance	410	400	428	354	374	369	398	319	348	386	333	460	381
Ill health, disability	178	181	214	214	209	215	211	191	235	211	220	248	192
Home responsibilities	309	349	296	337	282	253	264	301	295	287	270	263	318
Think cannot get a job	423	409	418	368	459	351	355	350	345	321	295	275	291
Other reasons[1]	174	246	175	174	160	166	156	171	174	147	180	179	241

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[1] Includes small number of men not looking for work because of "home responsibilities."

NOTE: Data have been revised based on the experience through December 1986. See the article in this issue for additional information.

HOUSEHOLD DATA
NOT SEASONALLY ADJUSTED
QUARTERLY AVERAGES

A-54. Persons not in the labor force by reason, sex, and age

(In thousands)

Reason and sex	Total		Age							
	IV 1985	IV 1986	16 to 19 years		20 to 24 years		25 to 59 years		60 years and over	
			IV 1985	IV 1986	IV 1985	IV 1986	IV 1985	IV 1986	IV 1985	IV 1986
TOTAL										
Total not in labor force	62,867	62,908	7,029	7,068	4,307	4,134	21,139	20,895	30,392	30,811
Do not want a job now	57,019	57,219	5,850	5,968	3,463	3,345	17,974	17,810	29,733	30,096
Current activity:										
Going to school	8,048	8,075	5,203	5,385	1,880	1,769	945	880	19	40
Ill, disabled	3,816	3,773	38	38	73	68	1,853	1,868	1,853	1,801
Keeping house	26,738	25,907	341	344	1,229	1,211	12,544	12,273	12,624	12,078
Retired	14,970	15,781	-	-	-	-	382	363	14,588	15,418
Other activity	3,447	3,683	268	201	281	297	2,250	2,426	649	759
Want a job now	5,847	5,690	1,178	1,102	843	789	3,163	3,084	659	713
Reason for not looking:										
School attendance	1,432	1,378	956	914	232	196	240	264	4	4
Ill health, disability	930	817	18	12	81	51	630	548	201	208
Home responsibilities	1,283	1,277	66	49	243	246	937	915	36	66
Think cannot get a job	1,149	1,120	70	84	155	158	704	654	219	223
Job-market factors	744	794	55	45	92	112	521	518	74	118
Personal factors	406	326	16	39	63	46	182	136	144	105
Other reasons[1]	1,053	1,097	68	43	132	138	652	703	199	214
Men										
Total not in labor force	20,470	20,773	3,434	3,486	1,503	1,398	3,881	4,015	11,653	11,873
Do not want a job now	18,529	18,807	2,849	2,934	1,215	1,152	3,125	3,186	11,340	11,535
Current activity:										
Going to school	4,098	4,109	2,677	2,776	1,008	938	405	381	8	14
Ill, disabled	1,996	2,000	24	21	36	42	1,065	1,059	870	876
Keeping house	372	421	20	16	13	25	141	148	199	231
Retired	10,131	10,209	-	-	-	-	323	291	9,808	9,919
Other activity	1,932	2,069	128	121	158	147	1,191	1,307	455	495
Want a job now	1,942	1,965	584	554	288	245	756	829	313	338
Reason for not looking:										
School attendance	679	647	487	474	117	74	72	95	2	4
Ill health, disability	436	396	9	4	40	23	297	256	91	114
Think cannot get a job	474	483	48	57	87	78	228	259	112	88
Other reasons[1]	352	440	40	19	44	70	159	219	108	132
Women										
Total not in labor force	42,396	42,136	3,595	3,582	2,804	2,736	17,258	16,880	18,739	18,938
Do not want a job now	38,490	38,411	2,999	3,033	2,250	2,194	14,849	14,625	18,393	18,560
Current activity:										
Going to school	3,950	3,966	2,525	2,611	873	830	540	498	12	26
Ill, disabled	1,820	1,773	13	14	37	27	787	809	982	923
Keeping house	26,365	25,486	321	328	1,216	1,187	12,405	12,124	12,425	11,848
Retired	4,839	5,572	-	-	-	-	59	73	4,780	5,499
Other activity	1,516	1,614	140	80	124	150	1,058	1,121	194	264
Want a job now	3,906	3,724	595	548	555	542	2,408	2,257	346	377
Reason not looking:										
School attendance	753	731	470	439	115	123	168	169	1	-
Ill health, disability	494	421	9	8	41	27	333	292	111	94
Home responsibilities	1,283	1,277	66	49	243	246	937	915	36	66
Think cannot get a job	675	637	22	28	69	79	476	396	107	135
Other reasons	700	658	28	24	87	67	494	485	91	82

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[1] Includes small number of men not looking for work because of "home responsibilities."

NOTE: Detail in tables A-54 and A-55 may not add to not-in-labor-force totals because of differences in the weighting patterns used in aggregating these data.

A-55. Persons not in the labor force by reason, race, Hispanic origin, age, and sex

(In thousands)

Reason, race, and Hispanic origin	Total		Age						Sex			
	IV 1985	IV 1986	16 to 24 years		25 to 59 years		60 years and over		Men		Women	
			IV 1985	IV 1986	IV 1985	IV 1986	IV 1985	IV 1986	IV 1985	IV 1986	IV 1985	IV 1986
WHITE												
Total not in labor force	53,778	53,668	8,738	8,534	17,700	17,471	27,340	27,663	17,264	17,467	36,514	36,201
Do not want a job now	49,528	49,575	7,365	7,299	15,375	1,531	26,786	27,039	15,859	16,041	33,668	33,531
Current activity:												
Going to school	6,379	6,280	5,668	5,566	694	683	18	26	3,256	3,221	3,123	3,059
Ill, disabled	3,100	3,129	88	80	1,470	1,531	1,542	1,519	1,623	1,676	1,477	1,453
Keeping house	23,885	23,079	1,248	1,301	11,062	10,756	11,573	11,024	283	330	23,602	22,749
Retired	13,409	14,131	-	-	338	348	13,071	13,783	9,166	9,201	4,243	4,930
Other activity	2,754	2,953	361	352	1,811	1,913	582	687	1,531	1,613	1,223	1,340
Want a job now	4,251	4,095	1,376	1,235	2,326	2,239	553	624	1,405	1,425	2,846	2,670
Reason for not looking:												
School attendance	1,007	937	848	764	159	174	1	1	514	452	493	485
Ill health, disability	652	583	51	38	447	376	155	168	316	304	337	280
Home responsibilities	971	940	217	169	723	689	32	63	-	-	971	940
Think cannot get a job	765	772	113	125	464	452	188	198	292	326	473	445
Other reasons[1]	855	862	147	119	533	548	177	196	283	343	572	519
BLACK												
Total not in labor force	7,367	7,449	2,100	2,126	2,658	2,632	2,608	2,691	2,816	2,680	4,751	4,769
Do not want a job now	5,973	6,057	1,525	1,539	1,937	1,314	2,509	2,608	2,148	2,227	3,823	3,831
Current activity:												
Going to school	1,228	1,283	1,082	1,176	143	105	2	2	586	631	641	652
Ill, disabled	652	578	22	17	341	303	288	259	342	279	309	299
Keeping house	2,200	2,171	262	227	1,030	1,058	907	890	73	84	2,127	2,088
Retired	1,283	1,393	-	-	34	16	1,250	1,377	787	835	496	558
Other activity	610	631	159	119	389	432	62	80	360	398	250	234
Want a job now	1,394	1,393	573	588	723	721	97	84	467	454	928	939
Reason for not looking:												
School attendance	351	380	293	308	58	73	-	-	124	157	227	223
Ill health, disability	259	209	44	22	169	149	46	37	112	82	147	127
Home responsibilities	260	281	86	93	170	184	4	3	-	-	260	281
Think cannot get a job	357	302	102	104	224	172	30	26	173	127	185	175
Other reasons[1]	167	221	48	61	102	143	17	18	58	88	109	133
HISPANIC ORIGIN												
Total not in labor force	4,284	4,261	1,225	1,242	2,031	1,965	1,028	1,054	1,195	1,168	3 090	3,094
Do not want a job now	(2)	3,734	(2)	1,072	(2)	1,646	(2)	1,016	(2)	1,008	(2)	2,725
Current activity:												
Going to school	(2)	736	(2)	647	(2)	87	(2)	2	(2)	370	(2)	366
Ill, disabled	(2)	261	(2)	6	(2)	174	(2)	81	(2)	149	(2)	112
Keeping house	(2)	2,004	(2)	340	(2)	1,244	(2)	419	(2)	36	(2)	1,968
Retired	(2)	500	(2)	-	(2)	8	(2)	491	(2)	310	(2)	189
Other activity	(2)	233	(2)	78	(2)	133	(2)	23	(2)	143	(2)	90
Want a job now	(2)	527	(2)	172	(2)	317	(2)	36	(2)	159	(2)	369
Reason for not looking:												
School attendance	(2)	127	(2)	98	(2)	29	(2)	-	(2)	45	(2)	82
Ill health, disability	(2)	67	(2)	5	(2)	44	(2)	17	(2)	40	(2)	27
Home responsibilities	(2)	156	(2)	43	(2)	111	(2)	3	(2)	-	(2)	156
Think cannot get a job	(2)	98	(2)	8	(2)	79	(2)	10	(2)	43	(2)	55
Other reasons[1]	(2)	79	(2)	18	(2)	54	(2)	6	(2)	31	(2)	49

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[1] Includes small number of men not looking for work because of "home responsibilities."

[2] Beginning in January 1986, data for persons of Hispanic origin have been revised to reflect new population estimates. Revised not-in-labor-force data by reason are not available for 1985.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Senator **Sarbanes**. I'm pursuing this because I think there's something to be gained by coming at the employment problem—I mean, I'm really sounding your refrain to some extent—from the point of view of participation. As you point out, the black teenager figure is 24 percent on the participation ratio. When you look at the unemployment figures, that's not going to be fully reflected because a lot of them are not actually seeking jobs. They are out there unemployed and not working, and they're at the age when they ought be working.

Mrs. **Norwood**. That's correct.

Senator **Sarbanes**. So somehow we don't do a full count of that.

Mrs. **Norwood**. That's why I feel so strongly that you can't look at a single number and understand what's going on in the labor market. One needs to look at employment and at unemployment. And I think it's only by looking below those numbers at all the disaggregated data that you can determine which are the groups which need to be targeted for policy purposes. It is always necessary to focus on all unemployed. There's a certain amount of frictional unemployed that will always be there.

Senator **Sarbanes**. Senator Melcher.

Senator **Melcher**. The data on table A-7, all of the figures in the duration column under January 1987, the past January, the month just preceding this month, show I guess percentagewise substantial increases, and yet when seasonally adjusted they show decreases, all but one of the five figures shows decreases from the previous month.

How reliable is your seasonally adjusted figure?

Mrs. **Norwood**. Our seasonal adjustment process is as reliable as we can make it. Is it perfect? Certainly not. We keep working on new approaches. We consult with other countries, and I think that we do at least as good a job and probably better than many other countries. But you're quite right that there could be some distortion due to seasonal adjustment. I don't see anything that stands out as a seasonal adjustment problem this particular month, but January is a month with very large seasonals—January and June are the 2 months that are probably the most difficult of all, and it's for that reason that we always caution users to be sure to look at several months of data. There really has been no real statistically significant movement in the duration figures.

I think that, perhaps, the most important information from them is that the long-term unemployed, 27 weeks or more, has remained at such a high level, about 1.2 million.

Senator **Melcher**. Turning just to mining, the number of unemployed persons in table A-6 increases slightly in January compared to the preceding December. It increases substantially from January 1987 compared to January 1986. It's substantially higher. Yet, in the unemployment rates, it shows a slight decline between January and the preceding December, 0.1 percent, but shows a remarkable increase in unemployment between January 1986 and January 1987, almost—well, precisely 3.3 percent.

Should that figure, since it's a basic industry, be a caution figure to us?

Mrs. **Norwood**. Well, I think it's quite clear that that industry is in considerable trouble. In looking at industry data, I prefer to look at the establishment series, and there you will find that——

Senator **Melcher**. What table is that?

Mrs. **Norwood**. Well, that's in the "B" tables, B-1. A year ago, employment in the oil and gas extraction industry was 564,000. Current employment is 416,000, before seasonal adjustment. That's a drop of more than 25 percent in employment. So that industry really has suffered a great deal. We have talked about that many times before this committee and it is the oil and gas extracting industry that's driving the employment figures for mining, of which it is a part.

Senator **Melcher**. Well, as I caught up with you, Commissioner, you're referring to a figure of January 1986 of 564,000 as compared to 410,000?

Mrs. **Norwood**. Yes—well, that's another way of looking at it; 564,000 in January of 1986 and 416,000 in January of 1987. That's a very significant drop in employment.

Senator **Melcher**. All right. What you're saying then I detect is that you prefer to look at table B-1 as compared to the other table.

Mrs. **Norwood**. Well, I think that they are consistent in what they are showing. There has been a severe decline in oil and gas extraction and mining employment in general over the last year and I think both of our surveys are showing that. If you want very detailed information by industry, we find that the payroll survey is a bit more accurate. But these surveys are showing essentially the same phenomenon.

Senator **Melcher**. And then we should attach great caution to them?

Mrs. **Norwood**. Well, I think obviously my role is to tell you to attach caution to things, but I believe that it is very clear that the oil and gas extraction industry is in great trouble. It has lost 25 percent or more of its jobs in the last year and there does not seem to be any general trend to reverse that. So I think that's a clearcut conclusion that one can come to from these data.

Senator **Melcher**. What's the time lag, if you can tell me, on the status of oil prices, crude oil prices, whether it's a decline or an increase, and reflection in the Consumer Price Index?

Mrs. **Norwood**. Well, I can't tell you that exactly. Some kinds of commodities show up more quickly than others. Generally, we have found that gasoline prices reflect the change soon after any change in price is announced.

Senator **Melcher**. Well, let's assume that's within 30 days, just for an assumption. What I'm really getting at is what's the others? Isn't the time lag rather dramatically increased for plastics and so on?

Mrs. **Norwood**. It take some time for those to filter through the economy to get at the indirect effects, which is really what you're getting at—the use of petroleum products in the manufacturing process. That depends in part on inventories and it depends in part on how quickly the producers reflect those prices.

But it's quite clear that we can expect some increase in oil prices and that that will find its way through the economy in the future.

Senator **Melcher**. My recollection is that for fuel, gasoline and diesel, it's about 30 days, and for the rest of it it's about a year or a little more.

Mrs. **Norwood**. That may be. I don't know.

Senator **Melcher**. All right. Maybe one or two questions about agriculture as being separated from agribusiness. Do you do that or not or do you have a category for agribusiness?

Mrs. **Norwood**. No, we do not. We do very little work with agricultural data. There is a statistical reporting service in the Department of Agriculture which is quite expert on all kinds of farm and rural activities and I'm sure that they make some breakdowns of that kind.

We specialize in the nonfarm economy.

Senator **Melcher**. I've never found—maybe I haven't looked hard enough—any Agriculture Department data that related to employment or unemployment tables that could be attached to agribusiness. Of course, you must catch a lot of it since you have trucking, retail stores, including supermarkets and whatever.

Mrs. **Norwood**. Sure. And the household survey, of course, covers the total population. It's just that our business survey is a nonagricultural survey and our price data are nonfarm data.

Senator **Melcher**. Well, returning once more to the question of the tables and the significance they present, if you can pinpoint some significant change in the way you gather your data, what difference is there between 15 years ago and now? Is there any real significant change that sticks out?

Mrs. **Norwood**. You mean in——

Senator **Melcher**. Let me give you an example. How about the question of how long somebody is unemployed, that time when somebody is unemployed when his benefits have run out? Has there been a—just using 15 years ago as a benchmark, has there been a significant change?

Mrs. **Norwood**. Well, the unemployment rate has clearly been ratcheting upward and if we go back to, say, approximately 1971, we are going to find a much lower unemployment rate—in fact, at about 6.1 percent in December 1970, 5.9 percent in January 1971. So you will find that much less. The labor force, of course, would have been much smaller, and employment would have been smaller, and population would have been smaller.

Senator **Melcher**. Well, my question referred to the method of data collection.

Mrs. **Norwood**. There has been no basic change. Obviously, we have made some improvements in bringing in the population counts from the new population censuses and things of that sort, but the basic current population survey is a household survey of roughly 60,000 households. It is done in much the same way as it was done then.

The establishment survey is done in a Federal-State cooperative manner in much the same way as it was done in the past. We think we have improved some of the statistical techniques, but those are only technical factors that have changed.

The basic structure of the two surveys is very similar to the way it was then.

Senator **Melcher**. Did I correctly understand the response to Chairman Sarbanes a few moments ago that if somebody was employed for 2 hours a week that that person would be counted as employed?

Mrs. **Norwood**. Yes, unless he was an unpaid farm worker.

Senator **Melcher**. Did you count it the same was 15 years ago?

Mrs. **Norwood**. Yes.

Senator **Melcher**. It counts as a whole?

Mrs. **Norwood**. It counts as an employed person, but we do note that it is part time and we publish data on the number of people who are employed part time voluntarily and those who are employed part time not voluntarily.

Senator **Melcher**. When you make your survey and you find an 18-year-old that isn't working, is that 18-year-old going to say, "Well, I am employed 2 hours a week on babysitting?"

Mrs. **Norwood**. Well, the questionnaire is quite scientifically designed. People are never really specifically asked if they are unemployed, for example. People are classified as either having worked for pay during the survey week or as looking for work, available for work and not having worked during the survey week, or as outside of the labor force entirely. So there are three categories.

This is a structure or system which is used all over the world, although the United States has provided the leadership.

Senator **Melcher**. Has this questionnaire been changed in that regard in the last 15 years?

Mrs. **Norwood**. It has been reviewed by two presidentially appointed commissions, one appointed by President Kennedy in the 1960's, one appointed by President Carter, and both of those commissions have made some suggestions for minor changes. We have put some of their recommendations into effect; others we have not because of the funds that would be increased, particularly, with reference to improving state data. I want to emphasize, however, that each Commission endorsed the overall concepts.

Senator **Melcher**. Well, this questionnaire is a written questionnaire or is it by telephone?

Mrs. **Norwood**. Yes, it is a written questionnaire which is administered by Census Bureau agents. The household survey is one of the surveys the Census Bureau does for the Bureau of Labor Statistics.

The business survey we do with our own agents. There is always a personal visit at the beginning of the period when the family comes into the survey. There are followup interviews done by telephone.

Senator **Melcher**. Well, I'm going to make an assumption and I think it's correct, that part of that questionnaire is going to ask, "Do you collect unemployment compensation?"

Mrs. **Norwood**. No, sir, we don't ask that question.

Senator **Melcher**. You don't ask that?

Mrs. **Norwood**. Only in special supplements for other purposes. That is not a part of the definition of unemployment.

Senator **Melcher**. All right. I'm trying to visualize the quandary this typical 18-year-old might be in or anybody else of any age, male or female, drawing unemployment compensation and they're asked—is this questionnaire being done in person or just by mail?

Mrs. **Norwood**. No, it's not done by mail at all. It is done either in person or by telephone.

Senator **Melcher**. All right. And it can be done by telephone. I'm just trying to visualize the quandary of somebody who's drawing unemployment compensation and how he's going to answer, "Have you done anything that you got $10 for or any amount of money in the last week?" What are they going to say? They're supposed to report that in most cases, if they got something.

Mrs. **Norwood**. A lot of them do report just those kinds of things.

Senator **Melcher**. They do?

Mrs. **Norwood**. Yes, they certainly do.

Senator **Melcher**. They must have great confidence or else they're reporting that.

Mrs. **Norwood**. The statistical agencies in this country have worked very hard to develop that kind of confidence among the citizens of the country. We promise complete and absolute confidentiality. Our interviewers are very well trained. But obviously, nothing is perfect.

Senator **Melcher**. You say "our interviewers," are they yours or the Census Bureau's?

Mrs. **Norwood**. Well, there is one statistical system. These particular interviewers for the current population survey happen to be on the payroll of the Census Bureau, but we are very much involved in the training process and we are very much aware of all of the quality factors and work with the Census Bureau very closely to be certain that that survey is up to the state of the art.

It is a good survey. I would certainly not come here and tell you that it is a perfect survey. In fact, one of the things that I have begun is a joint Census Bureau-BLS review of the entire CPS with a view toward developing a strategic plan for how the CPS should be conducted in the 1990's. I think it is not too soon to begin to look at that issue.

This is a tremendously important survey. I believe that there are changes in social conditions out there which need to be taken into account. So we have begun a long-range research effort. The Congress will be hearing about it because there will be some costs involved.

Senator **Melcher**. Thank you.

Senator **Sarbanes**. Commissioner, I have just a few questions.

First—and it follows a bit on the first question that Senator Melcher put—in the table this morning, civilian employment actually declined by 1.5 million before seasonal adjustment?

Mrs. **Norwood**. Yes, that's correct.

Senator **Sarbanes**. The seasonally adjusted figure showed an increase of 375,000. I guess my first question is, is this gap historically consistent or does it seem to be a somewhat larger gap? This leads to the next question, are you concerned that there may be changes occurring in the seasonal employment patterns in the U.S. that may raise some questions about the seasonal adjustment factor that's being used?

Mrs. **Norwood**. The seasonals for the month of January are extraordinarily large. There is normally, for example, a drop in employment of 1,873,000. That's a very, very large number.

Now we have gone back, as we always do, to look at what the seasonal factors are and what employment has been in the last 10 or so years, particularly the last 5 or 7 which are used in the seasonal adjustment process.

There have been some changes, particularly in things like retail trade, and that's why I commented about the retail trade data.

My view is that there is clearly a good deal of employment growth. It may not be 450,000 as the business survey has shown, but it is sizable.

I also think there is a lot of labor force growth. The labor force tends to move in spurts, and late last year we had a period with fairly small growth—only about 170,000 between October and December. So it seems to me that what we are seeing now is quite realistic.

As I indicated in my testimony, the retail trade and the construction figures appear to be perhaps slightly stronger—because of the seasonals—than they might have been under more normal seasonal conditions. But I think we need another couple of months to be sure of that.

Senator SARBANES. What was the labor force growth in 1986?

Mrs. NORWOOD. In 1986, it was 2,272,000. I'm sorry. That's from January to January.

Senator SARBANES. What are you expectations for labor force growth in 1987?

Mrs. NORWOOD. Based upon population data growth rates, our expectation is that the labor force will continue to grow more slowly than it has in the past, but there will be growth and the growth will probably be from minorities and women in large part, but also from men.

Senator SARBANES. Is there any way you can project a figure?

Mrs. NORWOOD. I don't have a figure to give you. We have made projections to 1995 and we expect really a bit more growth, I believe, in the rest of this decade and then a little less in the early part of the 1990's. I can try to provide a paragraph for the record.

Senator SARBANES. Assuming the labor force grew in 1987 at the rate that it grew in 1986, how much would real GNP have to grow in order to maintain an unemployment rate where it is now?

Mrs. NORWOOD. I don't really have the answer to that. There are a lot of people who feel the GNP growth has to be at least 3 percent in order to have a downward effect on the unemployment rate. But those relationships were developed many years ago. We have a very different structure of the economy now and I'm not sure that they still hold up.

What I think we have seen clearly is that the growth that we have had over the last year has really not been enough to change the unemployment rate very much. That's quite clear.

Senator SARBANES. On prices, I wanted to make sure I followed this analysis. But for the sharp drop in energy prices, the CPI would have gone up almost 4 percent, is that correct?

Mrs. NORWOOD. That's correct. The CPI would have been at about the rate that it has been for other years in the last few years, but that's, of course, as you know, a sharp deceleration from the very high rates of the 1980's.

Senator **Sarbanes**. Now let me ask this question. If you assume that the price movement and the rest of the economy in 1987 will be what it was in 1986—the rest of the economy other than energy that is—and that energy prices will go back up to the level that they were at before they dropped so sharply in 1986 and contributed to this very sharp decline, would the CPI then increase about 7 to 8 percent in 1987?

Mrs. **Norwood**. I don't really know. Perhaps Mr. Dalton can speculate about that. We can't tell you really very much about the indirect effects. As energy prices go up, they filter through the economy. All manufacturing costs increase. And there are models that can be run with assumptions, but we just don't know that offhand.

All we could really tell you is that if the energy prices that are in the CPI rose "x" percent what the effect on the index would be. What is the weight?

Mr. **Dalton**. It's about 11 percent of the overall CPI. If you look at the performance of the energy component in 1986, it declined 19.7 percent. And I think what you're suggesting was that what would happen if that were to turn around and that it roughly went up 20 percent.

Senator **Sarbanes**. Right.

Mr. **Dalton**. Energy is about 11 percent of the index, as I said, so a quick calculation—it's going to add 2 percent to the overall inflation rate. So you will then go from 3.8 to 5.8 or around 6 percent, if that were to occur. And as the Commissioner points out, that is just the direct impact of higher energy costs themselves. It doesn't account for the secondary effects of higher energy prices throughout the economy and those have been variously estimated, but the consensus is that the indirect effects are about equal to the direct effects.

Mrs. **Norwood**. But they take more time to have an effect.

Mr. **Dalton**. Right, to filter through.

Senator **Sarbanes**. Well, as I understand it, you say the drop was responsible for 2.7 percent, is that correct?

Instead of 3.8 we had 1.1.

Mr. **Dalton**. Correct.

Mrs. **Norwood**. That's right.

Senator **Sarbanes**. And you say the sharp drop in energy prices was almost entirely responsible for the deceleration in the overall index.

Now if you just reverse the assumption, that the energy prices will go back to where they were, is it then reasonable to assume that that's going to contribute 2.7 percent to the CPI, just like the drop away from it?

Mr. **Dalton**. It isn't perfectly symmetrical, but, yes, it's in that neighborhood.

Senator **Sarbanes**. Okay. So in effect, you would then have to add that to the roughly 3.8 or 4 percent to get what the next year's figure would be?

Mr. **Dalton**. Right.

Senator **Sarbanes**. So you're really looking at a situation where you could anticipate the Consumer Price Index going up 6.5 to 7 percent?

Mrs. **Norwood**. If energy prices went up quite that much. I don't think any of the speculation at least that I've read about is suggesting that large an increase in energy prices.

Mr. **Dalton**. But the reasoning is essentially correct.

Mrs. **Norwood**. Yes, your reasoning is quite correct.

Without the drop in energy prices, the 1986 inflation would have been essentially the same really as the rate of inflation from 1982 on.

Senator **Sarbanes**. My final question has to deal with the factory workweek, weekly factory hours, which is really at quite a high level, is it not?

Mrs. **Norwood**. Yes, it's extremely high.

Senator **Sarbanes**. What is your explanation for that?

Mrs. **Norwood**. Part of the explanation I think is——

Senator **Sarbanes**. Let me preface is with this question. Is it a higher level historically than you would expect at the levels of unemployment that we have?

Mrs. **Norwood**. Yes, it is.

Senator **Sarbanes**. Because my understanding historically is that as you get the uneployment rate down lower and lower, you tend to get the longer work week.

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. What is your explanation for that?

Mrs. **Norwood**. Well, I think that part of the explanation at least is that employers are being much more careful now than they were in the past about hiring employees, and certainly the employment data for manufacturing show that. They are expanding hours in part as a substitute for hiring more employees. Labor costs are high. The fringe benefits associated with the actual wage costs are such that I think employers are being extraordinarily careful and two things are happening. One is that they are increasing hours, and the other is that they are using more temporary help.

Some of this may be related to some of the attitudes that were developed during the period of extraordinarily high interest rates so that there is a feeling that inventories needs to be kept very lean. Even though interest rates have gone down, there is still an expectation problem.

So all in all, it seems to me that it can be explained in large part by—one could call it—a rational behavior of manufacturers or employers.

Senator **Sarbanes**. Are you saying, in a sense, that it's cheaper to pay overtime than to pay additional workers benefits?

Mrs. **Norwood**. Yes, I think it is cheaper and, more important, there is no obligation then to worry about reducing the employment later should it be necessary to do so. You can cut back hours more easily than you can cut back employees.

Senator **Sarbanes**. Do you have anything else?

Senator **Melcher**. Yes. Commissioner, turning to the establishment data in the series of B tables, I note that in B-2 you admit that there's no use in trying to have seasonally adjusted figures for mining and construction because they are such small components relative to the trend cycle and/or an irregular component, so you don't measure it.

Mrs. **Norwood**. Yes. That's another way really of saying that the not-seasonally adjusted data are the same as the seasonally adjusted data.

Senator **Melcher**. On table B-3, B-5, and B-4 also, you're able to do that and see very little difference between the components and the evaluations and the trends in table B-2 compared to B-5?

Mrs. **Norwood**. That's because B-3 and B-4 are dominated by the earnings data more than the hours. Table B-2 is on weekly hours only.

Senator **Melcher**. B-5 is the one I'm thinking of in particular, and that's weekly hours of production.

But at any rate, let me see if I understand this correctly in reading that B-5 table. We look at January 1986 for mining at 104.3 and January 1987 preliminary at 79.7. That means percentage of 1977, is that correct?

Mrs. **Norwood**. No. That's an index—that's the level of the index, so there is a drop.

Senator **Melcher**. All right. I meant to say the same thing, based on 1977.

Mrs. **Norwood**. That's correct.

Senator **Melcher**. Now in mining, I presume that mining includes coal production, is that correct?

Mrs. **Norwood**. Overall mining does, yes.

Senator **Melcher**. Hard rock minerals?

Mrs. **Norwood**. Yes.

Senator **Melcher**. And oil and gas?

Mrs. **Norwood**. Yes.

Senator **Melcher**. In 1977, using that as a base year, it might be instructive for oil and gas, but I wonder if 1977 wouldn't have reflected—by 1977, there must have been a very significant drop in employment in hard rock minerals.

Mrs. **Norwood**. Senator, we use 1977 as 100 for the arithmetic base for most indexes because that is the standard that has been adopted for all statistical agencies by order of the statistical policy group of the Office of Management and Budget.

But one can very easily change those numbers by dividing through by some different year. The numbers remain essentially the same. You can change the base and then, of course, the numbers will be different, but the percentage changes should be essentially the same.

Senator **Melcher**. If the base year for hard rock minerals was 1967, what would be the difference now?

Mrs. **Norwood**. Well, we can supply that for the record.

Senator **Melcher**. I wish you would.

Mrs. **Norwood**. We just don't have the data here.

Senator **Melcher**. I believe that we may be looking at the wrong base year for hard rock minerals in order to get a true picture of the scope of the decline.

Mrs. **Norwood**. We can easily calculate that and provide it for the record.

Senator **Melcher**. Thank you.

Senator **Sarbanes**. Thank you very much, Commissioner.

Mrs. **Norwood**. Thank you.

[Whereupon, at 10:55 a.m., the committee adjourned, subject to the call of the Chair.]

[The following information was subsequently supplied for the record:]

METAL MINING (SIC 10)

INDEX OF AGGREGATE HOURS
BASE=1967

1

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVG
67	112.5	113.6	114.3	113.7	114.2	118.5	117.1	85.7	79.7	77.7	77.1	76.8	100.0
68	74.8	79.4	80.4	111.1	115.3	119.8	120.6	117.8	114.7	112.3	110.0	110.3	105.5
69	110.3	111.8	112.7	113.8	116.3	118.1	118.9	120.5	119.9	118.3	117.2	118.7	116.3
70	118.0	117.0	119.3	120.5	122.2	125.9	125.9	125.0	122.0	120.8	120.2	122.2	121.6
71	118.3	117.3	117.1	117.5	117.5	123.0	80.6	95.9	102.2	112.1	111.7	108.4	110.1
72	102.7	101.7	101.6	102.0	101.8	104.3	99.4	98.4	103.4	102.6	103.0	103.0	102.0
73	103.0	102.6	103.6	106.6	107.5	110.8	107.8	109.6	111.8	110.3	111.4	115.1	108.3
74	114.6	113.0	113.4	115.6	116.8	120.9	121.0	106.8	122.7	122.2	121.6	123.5	117.6
75	118.7	115.0	112.3	111.8	110.8	114.2	107.6	106.6	109.6	110.2	109.0	110.1	111.3
76	104.6	104.6	105.1	110.5	110.9	117.0	116.7	114.5	116.6	115.3	112.4	111.6	111.6
77	114.3	114.7	113.9	116.2	117.7	121.0	102.5	88.1	84.2	86.3	87.7	103.0	104.1
78	107.4	107.7	110.1	110.4	109.4	111.9	112.7	112.3	114.5	114.4	114.6	116.3	111.7
79	115.0	114.7	115.0	115.8	114.4	122.0	121.2	122.4	121.4	121.7	123.8	124.7	119.3
80	122.4	122.7	123.7	122.4	123.2	124.8	93.2	84.1	98.0	97.3	111.6	122.1	112.1
81	121.2	121.9	122.1	119.6	119.0	124.2	119.1	119.7	118.9	112.0	112.2	110.1	118.3
82	105.8	101.4	100.1	95.6	84.3	82.8	70.9	62.6	59.9	56.6	58.3	60.4	78.2
83	62.2	59.7	60.2	59.9	61.3	62.4	58.7	58.6	58.3	60.2	60.9	61.6	60.3
84	62.9	62.1	62.8	63.1	64.6	64.7	62.3	58.5	59.1	57.3	57.5	55.1	60.9
85	53.2	53.9	55.1	54.9	54.9	55.2	51.9	51.6	50.6	50.1	50.7	50.0	52.7
86	50.1	50.3	50.3	50.4	49.6	49.1	48.0	44.9	46.2	46.1	46.4	48.3	48.4
87	49.7	.	.	.	.	.	.	.	.	.	.	.	.

COAL MINING (SIC 11,12)
INDEX OF AGGREGATE HOURS
BASE=1967

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVG
67	102.3	99.1	97.2	97.0	98.5	102.6	100.4	101.0	100.2	98.7	102.9	100.5	100.0
68	98.6	98.0	99.0	97.0	96.9	99.9	99.3	97.6	96.9	44.8	96.2	96.9	93.5
69	98.0	95.7	89.8	96.7	95.1	83.2	88.8	97.9	97.6	98.2	98.3	101.1	95.0
70	99.7	101.4	100.9	103.4	99.5	105.6	103.4	106.1	108.1	111.4	111.1	113.4	105.3
71	115.5	113.9	114.6	115.6	113.0	114.5	115.3	115.1	114.2	32.5	36.1	118.7	101.7
72	119.7	118.1	117.3	114.2	117.1	118.2	110.8	115.4	117.3	114.3	118.7	115.4	117.0
73	116.7	113.3	107.7	108.5	109.3	114.2	110.9	113.5	114.1	115.9	118.7	122.5	113.9
74	123.4	123.7	117.8	128.2	131.9	130.4	127.0	133.8	131.2	138.7	57.3	82.7	118.4
75	133.1	135.8	135.7	128.7	151.8	155.5	149.7	148.8	154.4	158.6	159.3	157.5	147.2
76	157.8	160.1	162.4	153.4	156.3	158.0	158.2	106.7	168.2	163.7	167.1	165.2	156.7
77	160.4	160.0	172.6	173.2	170.1	179.6	174.5	156.7	191.4	193.0	195.4	48.3	163.9
78	40.8	42.4	48.5	170.7	176.2	178.2	174.7	171.7	171.5	176.2	188.3	182.4	143.5
79	182.8	178.3	183.5	183.6	182.6	182.2	164.1	178.6	180.7	180.5	179.9	179.4	181.0
80	179.9	175.3	171.4	167.3	161.6	167.6	165.6	163.3	168.6	167.1	168.2	169.7	168.8
81	170.3	170.4	153.4	60.2	60.8	138.4	169.2	180.0	184.2	185.3	185.6	186.7	153.9
82	177.5	179.8	179.2	171.9	168.8	162.8	152.1	147.0	145.7	144.3	135.4	131.5	158.4
83	129.5	121.4	122.9	121.8	123.0	126.1	123.9	129.8	131.5	130.7	130.9	133.6	127.4
84	134.0	131.9	134.9	135.0	137.1	139.8	132.5	139.5	138.8	120.9	117.3	120.9	132.3
85	123.5	124.6	131.0	130.8	131.6	136.6	122.7	129.7	133.3	128.7	123.6	126.2	129.3
86	129.2	124.9	124.0	121.6	118.8	119.9	111.0	116.5	117.5	117.6	114.1	119.3	120.3
87	113.3	.	.	.	.	.	.	.	.	.	.	.	.

BITUMINOUS COAL MINING (SIC 12)
INDEX OF AGGREGATE HOURS
BASE=1967

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVG
67	102.1	99.0	97.3	97.1	98.7	103.2	99.8	101.3	100.1	98.8	103.3	101.1	100.0
68	98.9	98.8	99.5	97.7	97.4	100.7	100.0	98.2	97.6	42.7	96.6	97.7	93.8
69	98.3	96.4	90.4	97.4	95.6	83.6	89.8	99.0	98.4	99.0	99.0	101.7	95.7
70	100.3	102.2	102.3	104.5	100.9	107.2	104.5	107.1	109.1	112.5	112.2	114.8	106.4
71	117.2	115.7	116.2	117.5	114.6	116.2	117.0	116.8	115.7	29.9	33.6	120.8	102.7
72	122.1	120.7	119.8	118.9	119.5	120.8	113.1	117.8	119.9	116.6	121.3	117.9	119.6
73	119.0	115.5	109.7	110.6	111.3	116.5	113.1	115.7	116.2	118.0	121.2	125.1	116.2
74	126.0	126.4	120.6	131.3	135.2	133.7	130.3	137.4	134.7	142.5	57.2	83.8	121.2
75	136.8	139.6	139.2	134.1	156.1	160.0	153.8	152.9	158.8	163.1	164.0	162.3	151.8
76	162.4	165.0	167.4	158.1	161.0	162.8	163.1	109.2	173.5	168.7	172.4	170.4	161.5
77	165.5	164.8	178.1	178.9	175.4	185.3	180.0	161.5	197.7	199.4	202.0	48.1	169.0
78	40.4	42.0	48.4	175.9	182.3	184.5	181.1	177.7	177.3	182.3	194.9	188.6	148.1
79	189.1	184.4	189.8	190.1	188.7	188.3	169.6	184.5	186.7	186.4	185.8	185.2	187.2
80	185.8	181.1	177.0	172.7	166.4	172.8	150.0	168.4	174.0	172.3	173.4	175.0	174.1
81	175.7	175.8	158.1	60.3	62.6	142.3	174.6	185.6	190.0	191.0	191.4	192.7	158.5
82	183.0	185.3	184.8	177.4	174.1	167.8	156.6	151.3	149.9	148.5	139.2	135.2	163.2
83	133.3	125.3	126.7	125.7	126.8	130.1	128.1	134.1	135.8	135.0	135.2	138.0	131.4
84	138.5	136.2	139.3	139.5	141.7	144.6	137.1	144.2	143.5	124.7	120.8	124.6	136.6
85	127.4	128.6	135.3	135.1	135.9	141.3	126.6	134.6	138.4	133.6	128.3	131.0	133.7
86	134.1	129.4	128.5	125.8	122.9	124.0	114.7	120.6	121.6	121.7	117.9	123.3	124.5
87	117.1												

NONMETALLIC MINERALS, EXCEPT FUELS (SIC 14)
INDEX OF AGGREGATE HOURS
BASE=1967

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL AVG
67	88.3	85.4	89.9	97.9	101.9	107.4	108.7	110.6	108.8	105.8	101.7	93.8	100.0
68	80.4	86.1	87.3	96.9	100.7	104.2	105.3	105.6	103.2	100.1	94.2	91.9	96.4
69	83.6	84.7	88.8	96.8	100.3	103.7	104.4	104.8	104.2	101.2	98.0	92.8	97.0
70	80.3	83.5	88.1	94.5	97.4	101.5	103.4	102.7	99.6	97.7	94.2	89.6	94.4
71	80.9	78.8	85.0	92.7	97.0	101.8	102.5	101.9	99.5	99.6	96.1	89.7	93.8
72	82.2	81.4	87.1	91.5	96.1	101.2	101.9	103.4	102.1	100.1	94.8	87.0	94.1
73	79.9	81.9	89.3	94.8	99.6	105.7	106.0	106.6	105.8	104.7	100.8	96.7	97.6
74	84.6	90.8	94.0	97.5	103.5	106.4	105.4	105.8	104.8	103.0	99.0	92.7	98.9
75	82.6	80.7	80.1	88.5	95.1	95.8	96.4	96.7	95.6	96.0	90.0	86.2	90.3
76	79.4	79.6	83.3	89.5	91.7	95.7	96.8	96.6	95.8	94.3	90.5	86.4	89.9
77	72.2	78.0	84.1	92.6	96.5	101.0	101.0	100.2	98.9	97.9	94.9	87.9	92.1
78	73.1	78.2	84.6	94.2	97.1	103.8	105.0	104.6	103.3	102.7	100.5	93.5	95.1
79	81.0	84.1	92.7	97.5	103.2	107.5	106.2	107.9	106.5	106.1	102.6	99.3	99.6
80	87.0	86.4	91.8	94.2	97.3	98.2	98.2	96.8	97.6	96.4	94.7	90.9	94.2
81	80.1	77.5	83.7	89.5	92.1	92.7	93.9	93.6	91.8	90.7	87.2	82.4	88.0
82	64.2	69.6	74.4	79.3	84.0	86.8	87.6	87.3	87.0	84.5	80.3	73.7	79.9
83	65.8	62.4	68.8	74.3	79.7	83.5	84.3	84.5	85.2	83.8	81.4	75.6	77.4
84	67.8	68.9	73.6	80.5	85.7	89.9	90.9	91.6	92.6	90.1	86.9	80.4	83.3
85	70.3	69.1	77.6	84.1	89.6	91.2	92.1	91.5	91.4	88.7	85.6	78.6	84.2
86	71.3	67.7	75.0	84.9	88.6	89.5	90.1	91.3	90.9	88.6	84.6	79.5	83.5
87	73.3												

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, MARCH 6, 1987

Congress of the United States,
Joint Economic Committee,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-138, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senators Sarbanes and Proxmire; and Representatives Solarz and McMillan.

Also present: Judith Davison, executive director; and William R. Buechner, Christopher J. Frenze, and Dena Stoner; professional staff members.

Senator **Proxmire** [presiding]. The committee will come to order. Chairman Sarbanes has been delayed and he has asked us to go ahead so that we can move as rapidly as possible.

Without objection, Chairman Sarbanes' opening statement will be put in the record at this point.

[The written opening statement of Senator Sarbanes follows:]

WRITTEN OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

BEFORE THE

JOINT ECONOMIC COMMITTEE

"FEBRUARY EMPLOYMENT SITUATION"

March 6, 1987

This morning the Joint Economic Committee resumes its monthly hearings on the employment and unemployment situation with the figures for February 1987. We are pleased as always to welcome Janet Norwood, Commissioner of Labor Statistics.

Yesterday the Joint Economic Committee released its Annual Report, which discusses in detail the economic problems that face the United States in 1987. Today, we will look at several of those problems, particularly high unemployment and the recent surge in inflation.

First, with respect to inflation, it must be noted that in January both the Producer Price Index and the Consumer Price Index showed disturbing increases. Producer prices for finished goods rose 0.6 percent, after actually falling 1.5 percent in 1986. This rise occurred despite a 2 percent decline in food prices. The index for intermediate goods rose 0.9 percent in January and the index for raw materials rose 2.9 percent.

At the same time, the Consumer Price Index rose 0.7 percent in January. The increase in the CPI for the entire year in 1986 was 1.1 percent.

Falling oil prices last year were largely responsible for the lowest inflation rate in 25 years. Oil prices rose somewhat at the end of the year, and OPEC is continuing its renewed efforts to keep prices up. The CPI figure for January reflects some upward movement, and raises questions about the trend in oil prices in the months ahead.

Apart from oil prices, there appear to be other upward pressures on prices. Even excluding energy, consumer prices in January rose 0.5 percent.

This trend is particularly disturbing because factory utilization rates have been trending downward since 1984, the high point following the 1982 recession, and are currently below 80 percent. Unemployment has not fallen significantly, and as the BLS reported this morning the unemployment rate in February was 6.7 percent, precisely the same as in January. Unemployment fell slightly for adults but rose for teenagers. There were some good signs -- employment rose by more than 300,000 in both the payroll and household surveys and manufacturing employment rose by 50,000. But there are still 8 million Americans unemployed and that remains a major problem for our economy.

The Committee will now hear from Commissioner Norwood.

Senator **Proxmire**. Congressman McMillan, do you have a statement of any kind?

Representative **McMillan**. I have a brief statement.

Senator **Proxmire**. Go right ahead, sir.

OPENING STATEMENT OF REPRESENTATIVE McMILLAN

Representative **McMillan**. It gives me great pleasure to welcome Commissioner Norwood here this morning again on your monthly visit, and once again Mrs. Norwood brings encouraging news.

Employment as measured by the household survey rose 371,000 last month. This increase pushed the level of civilian employment to 111.4 million, a new record. More Americans are working now then ever before.

Another positive sign is the increase in the employment-population ratio. This important measure of the ability of our economy to provide enough jobs rose to 61.2 percent and this is another record high.

Some of the recent economic figures haven't been all that positive, but these may have been distorted by tax consideration. In this regard, the healthy 335,000 jump in payroll employment, an important coincident indicator, is especially reassuring.

To date this expansion has created over 12 million new jobs for American workers. Today's report indicates that the strong employment performance continues.

Furthermore, this morning's figures should dispel some of the doom and gloom we have been hearing lately about the health of the U.S. economy, and I thank you for coming this morning.

Senator **Proxmire**. Thank you, sir. Go right head, Commissioner.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND JEROME A. MARK, ASSOCIATE COMMISSIONER, OFFICE OF PRODUCTIVITY AND TECHNOLOGY

Mrs. **Norwood**. Thank you, it's always a pleasure to be here to offer the Joint Economic Committee a few comments to supplement our Employment Situation news release.

In February the labor force rose and more people found jobs. Unemployment held steady; for the third consecutive month, the overall jobless rate was 6.6 percent and the civilian rate was 6.7 percent. These rates are half a percentage point below the levels of a year ago. Indeed, they are the lowest since the spring of 1980.

Both the business survey and the household survey showed strong employment growth from January to February. Nonfarm payroll employment rose by 335,000 and total civilian employment in the household survey by 370,000. Since last October employment has increased by 1.2 million in both surveys.

The pattern of job growth in the business survey continues to show expansion in the service producing industries. In February employment in retail trade rose by 130,000 with nearly half of the growth in general merchandise stores. Employment in the services industry rose by 115,000 with sizable gains in business services and health services. Employment was also up in the rapidly growing finance, insurance, and real estate industry.

On the goods-producing side, the number of factory jobs rose by 50,000 in February, but most of the increase represented the return to work of persons who had been involved in labor-management disputes in the previous month. Nevertheless, factory hours rose sharply reaching 41.2 hours in February, the highest level in two decades. Largely as a result of the increase in the workweek, the index of aggregate hours in manufacturing rose by 1 percent.

Seasonally adjusted employment growth has been especially strong this year in the household survey. The proportion of the civilian working-age population with jobs reached a new high of 61.2 percent in February. Over the past year, that measure has risen by nearly a percentage point, with all groups, blacks, whites, and Hispanics, sharing in the employment increase.

The labor force has risen by 2.2 million over the past year. Blacks have entered the labor force at almost twice the rate of whites, and the rate of labor force increase for the Hispanic population has been even greater than that of the black population.

Indeed, the increases in labor force participation for both Hispanic men and women were greater than for either their white or black counterparts. A sizable number of Hispanic workers have found jobs over the past year. Although they comprise only about 7 percent of all U.S. workers, Hispanics accounted for 23 percent of the overall increase in employment.

The jobless rate for Hispanic workers fell a full percentage point in February to 9.6 percent, about halfway between the 14.3 percent jobless rate for blacks and the 5.7 percent for whites. In fact, the Hispanic rate was the only one among all the major population groups which showed any significant change from January to February. The number of Hispanic workers is relatively small, however, and we need several months of data to indicate that a trend has occurred.

Although little movement occurred in unemployment rates for other groups of the population from January to February, the median duration of unemployment dropped to 6.6 weeks. Of some concern, however, is the fact that the number of persons working part time because they could not find full-time jobs rose to 5.8 million in February. This series is more than 30,000 higher than a year earlier.

In summary, the data for February showed that the labor market improvement of the last few months continued. Unemployment rates were unchanged, but considerably lower than early last year. Both surveys show strong job growth, especially in services and retail trade. Although the number of factory jobs changed little over the month, factory hours were in the highest level in 20 years.

Mr. Chairman, last week the Bureau of Labor Statistics introduced the revised Consumer Price Index. That, as you know, is a large project. It took 5 years at a cost of something like $45 million. It was done on time and within budget. You may want to review with us some of those changes later, but I would like permission to insert in the record a short report describing the CPI revision and its improvement.

Senator Proxmire. Of course. Without objection, so ordered.

Mrs. Norwood. And now I and Mr. Dalton on my right, our price expert, and Mr. Plewes on my left, our employment and unemployment expert will be glad to try and answer any questions.

[The table attached to Mrs. Norwood's statement, together with the news release and the CPI report, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unad-justed rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1986									
February....	7.8	7.2	7.2	7.3	7.2	7.2	7.2	7.3	.1
March.......	7.5	7.2	7.2	7.1	7.1	7.1	7.1	7.1	.1
April.......	7.0	7.1	7.1	7.1	7.2	7.1	7.1	7.1	.1
May.........	7.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	–
June........	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	–
July........	7.0	7.0	7.0	7.0	7.0	6.9	7.0	7.0	.1
August......	6.7	6.8	6.8	6.8	6.8	6.9	7.0	6.8	.2
September...	6.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	–
October.....	6.6	6.9	6.9	6.9	7.0	6.9	6.9	7.0	.1
November....	6.6	6.9	6.9	6.9	6.9	6.9	7.0	7.0	.1
December....	6.3	6.7	6.7	6.7	6.6	6.7	6.7	6.7	.1
1987									
January.....	7.3	6.7	6.7	6.7	6.7	6.8	6.6	6.7	.2
February....	7.2	6.7	6.7	6.7	6.6	6.7	6.5	6.7	.2

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
March 1987

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1975 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1985 would be based, during 1985, on the adjustment of data from the period January 1975 through January 1985.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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THE EMPLOYMENT SITUATION: FEBRUARY 1987

Employment continued to rise in February, and unemployment was at the same level for the third straight month, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall unemployment rate was 6.6 percent and the civilian worker rate was 6.7 percent; both were half a percentage point below year-earlier figures.

Nonagricultural payroll employment--as measured by the monthly survey of establishments--rose by 335,000 in February, while civilian employment--as measured by the monthly survey of households--was up by 370,000. Both employment series have increased by nearly 1.2 million since last October.

Unemployment (Household Survey Data)

The number of unemployed persons was unchanged in February, remaining at a seasonally adjusted level of about 8.0 million. The jobless rate for civilian workers of 6.7 percent remained at its lowest point in nearly 7 years.

Jobless rates for most major labor force groups--adult men (5.9 percent), adult women (5.8 percent), teenagers (18.0 percent), whites (5.7 percent), and blacks (14.3 percent)--showed little or no movement from their January levels. The unemployment rate for Hispanics, which is relatively volatile, dropped to 9.6 percent. (See tables A-2 and A-3.)

The number of persons employed part time for economic reasons--sometimes referred to as the partially unemployed--increased by 275,000 in February. Their total has generally fluctuated in the 5.5 to 5.8 million range for the past 3 years. (See table A-4.)

Civilian Employment and the Labor Force (Household Survey Data)

Civilian employment rose by 370,000 in February, after seasonal adjustment, following a similar increase in the prior month, as the proportion of the civilian population that is employed edged up to a new high of 61.2 percent. The gain was concentrated among married women, whose employment rose by 290,000. (See tables A-2 and A-4.)

The civilian labor force continued to expand, rising by 315,000 to a seasonally adjusted level of 119.3 million. The labor force participation rate rose to 65.6 percent, also a new high. Over the year, the labor force was up by 2.2 million, with adult women accounting for nearly 3 out of every 5 added members.

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Jan.-Feb. change
	1986		1986	1987		
	III	IV	Dec.	Jan.	Feb.	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/	119,866	120,308	120,336	120,782	121,089	307
Total employment 1/	111,675	112,170	112,387	112,759	113,122	363
Civilian labor force	118,171	118,558	118,586	119,034	119,349	315
Civilian employment	109,980	110,420	110,637	111,011	111,382	371
Unemployment	8,191	8,138	7,949	8,023	7,967	-56
Not in labor force	62,664	62,807	62,961	62,793	62,649	-144
Discouraged workers	1,150	1,127	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	6.8	6.8	6.6	6.6	6.6	0
All civilian workers	6.9	6.9	6.7	6.7	6.7	0
Adult men	6.1	6.1	6.0	6.0	5.9	-0.1
Adult women	6.1	6.0	5.9	5.9	5.8	-.1
Teenagers	18.1	17.8	17.3	17.7	18.0	.3
White	6.0	6.0	5.8	5.9	5.7	-.2
Black	14.5	14.1	13.7	14.3	14.3	0
Hispanic origin	10.8	10.2	10.5	10.6	9.6	-1.0
ESTABLISHMENT DATA	Thousands of jobs					
Nonfarm employment	100,316	101,072	101,322	p101,641	p101,978	p337
Goods-producing	24,872	24,892	24,920	p25,009	p25,059	p50
Service-producing	75,444	76,180	76,402	p76,632	p76,919	p287
	Hours of work					
Average weekly hours:						
Total private	34.7	34.7	34.6	p34.8	p35.0	p0.2
Manufacturing	40.7	40.8	40.8	p40.9	p41.2	p.3
Overtime	3.5	3.5	3.5	p3.6	p3.6	p0

1/ Includes the resident Armed Forces.
p=preliminary.

N.A.=not available.

Industry Payroll Employment (Establishment Survey Data)

Total nonagricultural payroll employment rose by 335,000 in February, reaching a seasonally adjusted level of nearly 102 million. There have been increases of at least 240,000 in each of the last 6 months, with the largest in January and February. As in previous months, the February gain occurred largely in the service-producing sector, reflecting increases in the services and retail trade industries, the latter particularly in general merchandise stores. The finance, insurance, and real estate industry also experienced an employment increase. (See table B-1.)

Manufacturing employment rose by 50,000, due in large part to the return of workers after settlement of labor disputes in the steel and machinery industries. While there was a small rebound in motor vehicles and equipment, most other factory payrolls, both in durables and nondurables, were little changed.

Employment in the other goods-producing industries was essentially unchanged. Mining remained at a very low level, and the construction industry, which had risen markedly in January after seasonal adjustment, was unchanged in February.

Weekly Hours (Establishment Survey Data)

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls expanded by 0.2 hour to 35.0 hours, seasonally adjusted. Weekly hours in manufacturing rose 0.3 hour to 41.2. This was the longest factory workweek since November 1966. (See table B-2.)

As a result of the increase in both employment and hours of work, the index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls rose by 1.1 percent to 121.1 (1977=100), seasonally adjusted. The manufacturing index rose by almost the same magnitude to 94.5. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings rose 0.5 percent in February, after allowance for seasonality, while weekly earnings increased 1.0 percent. Prior to seasonal adjustment, hourly earnings rose by 2 cents to $8.89 and weekly earnings were up $2.46 to $307.59. Over the year, hourly earnings rose 15 cents and weekly earnings were up $6.93. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 171.4 (1977=100) in February, seasonally adjusted, an increase of 0.5 percent from January. For the 12 months ended in February, the increase was 1.9 percent. The HEI excludes the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. In dollars of constant purchasing power, the HEI increased 0.9 percent during the 12-month period ended in January. (See table B-4.)

The Employment Situation for March 1987 will be released on Friday, April 3, at 8:30 A.M. (EST).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes 250,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed,* regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. At the time the first half year's factors are calculated (upon availability of data for December), historical data for the previous 5-year period are subject to revision. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $4.50 per issue or $31.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1986	Jan. 1987	Feb. 1987	Feb. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987
TOTAL									
Noninstitutional population[2]	181,512	183,575	183,738	181,512	182,935	183,114	183,297	183,575	183,738
Labor force[2]	117,416	119,451	119,707	118,733	120,163	120,426	120,336	120,782	121,089
Participation rate[3]	64.7	65.1	65.2	65.4	65.7	65.8	65.7	65.8	65.9
Total employed[2]	108,374	110,832	111,204	110,248	111,941	112,183	112,387	112,759	113,122
Employment-population ratio[4]	59.7	60.4	60.5	60.7	61.2	61.3	61.3	61.4	61.6
Resident Armed Forces	1,691	1,748	1,740	1,691	1,749	1,751	1,750	1,748	1,740
Civilian employed	106,685	109,084	109,464	108,557	110,192	110,432	110,637	111,011	111,382
Agriculture	2,663	2,705	2,764	3,105	3,162	3,215	3,161	3,145	3,236
Nonagricultural industries	104,021	106,379	106,700	105,452	107,030	107,217	107,476	107,866	108,146
Unemployed	9,041	8,620	8,503	8,485	8,222	8,243	7,949	8,023	7,967
Unemployment rate[5]	7.7	7.2	7.1	7.1	6.8	6.8	6.4	6.6	6.6
Not in labor force	64,096	64,124	64,031	62,779	62,772	62,688	62,961	62,793	62,649
Men, 16 years and over									
Noninstitutional population[2]	86,954	88,020	88,099	86,954	87,682	87,773	87,868	88,020	88,099
Labor force[2]	65,904	66,880	66,898	66,737	67,130	67,407	67,425	67,672	67,764
Participation rate[3]	75.8	76.0	75.9	76.7	76.6	76.8	76.7	76.9	76.9
Total employed[2]	60,743	61,828	61,921	62,142	62,565	62,833	62,986	63,187	63,335
Employment-population ratio[4]	69.9	70.2	70.3	71.5	71.4	71.6	71.7	71.8	71.9
Resident Armed Forces	1,539	1,591	1,584	1,539	1,590	1,592	1,593	1,591	1,584
Civilian employed	59,204	60,237	60,337	60,603	60,975	61,241	61,393	61,596	61,751
Unemployed	5,161	5,052	4,976	4,595	4,565	4,574	4,439	4,484	4,429
Unemployment rate[5]	7.8	7.6	7.4	6.9	6.8	6.8	6.6	6.6	6.5
Women, 16 years and over									
Noninstitutional population[2]	94,558	95,556	95,639	94,558	95,253	95,341	95,429	95,556	95,639
Labor force[2]	51,513	52,571	52,809	51,996	53,033	53,019	52,911	53,110	53,325
Participation rate[3]	54.5	55.0	55.2	55.0	55.7	55.6	55.4	55.6	55.8
Total employed[2]	47,633	49,003	49,282	48,106	49,376	49,350	49,401	49,572	49,787
Employment-population ratio[4]	50.4	51.3	51.5	50.9	51.8	51.8	51.8	51.9	52.1
Resident Armed Forces	152	157	156	152	159	159	157	157	156
Civilian employed	47,481	48,846	49,126	47,954	49,217	49,191	49,244	49,415	49,631
Unemployed	3,880	3,568	3,527	3,890	3,657	3,669	3,510	3,538	3,538
Unemployment rate[5]	7.5	6.8	6.7	7.5	6.9	6.9	6.6	6.7	6.6

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[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

[Numbers in thousands]

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1986	Jan. 1987	Feb. 1987	Feb. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987
TOTAL									
Civilian noninstitutional population	179,821	181,827	181,998	179,821	181,186	181,363	181,547	181,827	181,998
Civilian labor force	115,725	117,703	117,967	117,042	118,414	118,675	118,586	119,034	119,349
Participation rate	64.4	64.7	64.8	65.1	65.4	65.4	65.3	65.5	65.6
Employed	106,685	109,084	109,464	108,557	110,192	110,432	110,637	111,011	111,382
Employment-population ratio[2]	59.3	60.0	60.1	60.4	60.8	60.9	60.9	61.1	61.2
Unemployed	9,041	8,620	8,503	8,485	8,222	8,243	7,949	8,023	7,967
Unemployment rate	7.8	7.3	7.2	7.2	6.9	6.9	6.7	6.7	6.7
Men, 20 years and over									
Civilian noninstitutional population	78,171	79,132	79,216	78,171	78,802	78,874	78,973	79,132	79,216
Civilian labor force	60,686	61,588	61,548	61,092	61,409	61,703	61,826	61,948	61,973
Participation rate	77.6	77.8	77.7	78.2	77.9	78.2	78.3	78.3	78.2
Employed	56,325	57,290	57,356	57,296	57,595	57,883	58,101	58,227	58,325
Employment-population ratio[2]	72.1	72.4	72.4	73.3	73.1	73.4	73.6	73.6	73.6
Agriculture	2,025	2,044	2,061	2,261	2,297	2,303	2,289	2,254	2,300
Nonagricultural industries	54,300	55,246	55,296	55,035	55,298	55,580	55,812	55,974	56,024
Unemployed	4,361	4,297	4,192	3,796	3,814	3,820	3,725	3,720	3,648
Unemployment rate	7.2	7.0	6.8	6.2	6.2	6.2	6.0	6.0	5.9
Women, 20 years and over									
Civilian noninstitutional population	87,185	88,150	88,237	87,185	87,856	87,933	88,016	88,150	88,237
Civilian labor force	47,847	48,966	49,148	48,009	49,014	49,043	48,923	49,161	49,348
Participation rate	54.9	55.5	55.7	55.1	55.8	55.8	55.6	55.8	55.9
Employed	44,610	45,970	46,232	44,820	46,020	46,067	46,058	46,261	46,475
Employment-population ratio[2]	51.2	52.1	52.4	51.4	52.4	52.4	52.3	52.5	52.7
Agriculture	493	520	535	591	612	675	621	628	641
Nonagricultural industries	44,117	45,450	45,697	44,229	45,408	45,392	45,437	45,633	45,835
Unemployed	3,237	2,996	2,916	3,189	2,994	2,976	2,865	2,900	2,873
Unemployment rate	6.8	6.1	5.9	6.6	6.1	6.1	5.9	5.9	5.8
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,465	14,545	14,546	14,465	14,527	14,557	14,558	14,545	14,546
Civilian labor force	7,192	7,149	7,271	7,941	7,991	7,929	7,837	7,926	8,028
Participation rate	49.7	49.2	50.0	54.9	55.0	54.5	53.8	54.5	55.2
Employed	5,750	5,823	5,875	6,441	6,577	6,482	6,478	6,524	6,582
Employment-population ratio[2]	39.8	40.0	40.4	44.5	45.3	44.5	44.5	44.9	45.2
Agriculture	145	141	168	253	253	237	251	264	295
Nonagricultural industries	5,604	5,682	5,707	6,188	6,324	6,245	6,227	6,260	6,287
Unemployed	1,443	1,326	1,396	1,500	1,414	1,447	1,359	1,402	1,446
Unemployment rate	20.1	18.5	19.2	18.9	17.7	18.2	17.3	17.7	18.0

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

HOUSEHOLD DATA

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1986	Jan. 1987	Feb. 1987	Feb. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987
WHITE									
Civilian noninstitutional population	154,889	156,313	156,431	154,889	155,856	155,979	156,111	156,313	156,431
Civilian labor force	100,099	101,662	101,809	101,178	102,297	102,455	102,503	102,746	102,893
Participation rate	64.6	65.0	65.1	65.3	65.6	65.7	65.7	65.7	65.8
Employed	93,144	95,036	95,377	94,780	96,147	96,281	96,533	96,717	96,995
Employment-population ratio[2]	60.1	60.8	61.0	61.2	61.7	61.7	61.8	61.9	62.0
Unemployed	6,954	6,625	6,432	6,398	6,150	6,174	5,970	6,029	5,898
Unemployment rate	6.9	6.5	6.3	6.3	6.0	6.0	5.8	5.9	5.7
Men, 20 years and over									
Civilian labor force	53,191	53,889	53,840	53,538	53,757	54,015	54,172	54,182	54,175
Participation rate	78.0	78.3	78.1	78.4	78.3	78.7	78.8	78.7	78.6
Employed	49,779	50,476	50,540	50,629	50,845	51,089	51,286	51,297	51,362
Employment-population ratio[2]	73.0	73.3	73.3	74.3	74.1	74.4	74.6	74.5	74.5
Unemployed	3,412	3,413	3,300	2,909	2,912	2,926	2,886	2,885	2,813
Unemployment rate	6.4	6.3	6.1	5.4	5.4	5.4	5.3	5.3	5.2
Women, 20 years and over									
Civilian labor force	40,648	41,535	41,639	40,750	41,598	41,540	41,514	41,680	41,762
Participation rate	54.3	55.0	55.1	54.4	55.2	55.1	55.0	55.2	55.2
Employed	38,221	39,331	39,576	38,365	39,431	39,399	39,456	39,568	39,735
Employment-population ratio[2]	51.0	52.1	52.3	51.2	52.3	52.3	52.3	52.4	52.6
Unemployed	2,427	2,204	2,062	2,385	2,167	2,141	2,058	2,111	2,028
Unemployment rate	6.0	5.3	5.0	5.9	5.2	5.2	5.0	5.1	4.9
Both sexes, 16 to 19 years									
Civilian labor force	6,260	6,237	6,330	6,890	6,942	6,900	6,817	6,885	6,955
Participation rate	52.8	52.4	53.2	58.1	58.4	58.0	57.3	57.8	58.4
Employed	5,144	5,229	5,261	5,786	5,871	5,793	5,791	5,852	5,898
Employment-population ratio[2]	43.4	43.9	44.2	48.8	49.4	48.7	48.7	49.2	49.5
Unemployed	1,115	1,009	1,070	1,104	1,071	1,107	1,026	1,033	1,057
Unemployment rate	17.8	16.2	16.9	16.0	15.4	16.0	15.1	15.0	15.2
Men	19.5	18.4	18.9	16.6	15.7	16.3	15.5	16.1	16.0
Women	16.1	13.8	14.8	15.4	15.2	15.7	14.6	13.8	14.3
BLACK									
Civilian noninstitutional population	19,863	20,187	20,218	19,863	20,089	20,120	20,152	20,187	20,218
Civilian labor force	12,318	12,558	12,696	12,572	12,720	12,719	12,707	12,831	12,957
Participation rate	62.0	62.2	62.8	63.3	63.3	63.2	63.1	63.6	64.1
Employed	10,485	10,809	10,872	10,704	10,895	10,910	10,968	10,997	11,101
Employment-population ratio[2]	52.8	53.5	53.8	53.9	54.2	54.2	54.4	54.5	54.9
Unemployed	1,833	1,749	1,824	1,868	1,825	1,809	1,739	1,833	1,855
Unemployment rate	14.9	13.9	14.4	14.9	14.3	14.2	13.7	14.3	14.3
Men, 20 years and over									
Civilian labor force	5,789	5,911	5,927	5,866	5,932	5,934	5,947	5,986	6,012
Participation rate	73.8	73.9	74.0	74.7	74.6	74.5	74.5	74.9	75.1
Employed	4,974	5,167	5,166	5,088	5,153	5,171	5,244	5,256	5,288
Employment-population ratio[2]	63.4	64.6	64.5	64.8	64.8	65.0	65.7	65.7	66.0
Unemployed	815	744	761	778	779	763	703	730	724
Unemployment rate	14.1	12.6	12.8	13.3	13.1	12.9	11.8	12.2	12.0
Women, 20 years and over									
Civilian labor force	5,754	5,913	5,991	5,792	5,909	5,943	5,907	5,984	6,030
Participation rate	58.3	58.9	59.5	58.6	59.1	59.3	58.9	59.6	59.9
Employed	5,034	5,195	5,218	5,068	5,178	5,200	5,182	5,221	5,255
Employment-population ratio[2]	51.0	51.7	51.9	51.3	51.8	51.9	51.7	52.0	52.2
Unemployed	721	718	773	724	731	743	725	763	775
Unemployment rate	12.5	12.1	12.9	12.5	12.4	12.5	12.3	12.8	12.9
Both sexes, 16 to 19 years									
Civilian labor force	774	734	778	914	879	842	853	860	915
Participation rate	36.2	34.2	36.2	42.8	41.1	39.3	39.8	40.1	42.6
Employed	477	447	488	548	564	539	542	520	559
Employment-population ratio[2]	22.3	20.8	22.7	25.6	26.3	25.1	25.3	24.2	26.0
Unemployed	297	287	290	366	315	303	311	340	356
Unemployment rate	38.4	39.1	37.2	40.0	35.8	36.0	36.5	39.5	38.9
Men	39.6	36.9	38.3	39.5	37.8	35.0	36.1	36.5	38.3
Women	37.1	41.7	36.2	40.7	33.8	37.0	36.9	43.2	39.5
HISPANIC ORIGIN									
Civilian noninstitutional population	12,184	12,653	12,692	12,184	12,469	12,505	12,540	12,653	12,692
Civilian labor force	7,822	8,310	8,329	7,922	8,200	8,226	8,320	8,431	8,457
Participation rate	64.2	65.7	65.6	65.0	65.8	65.8	66.3	66.6	66.6
Employed	6,809	7,357	7,445	6,991	7,345	7,437	7,446	7,538	7,644
Employment-population ratio[2]	55.9	58.1	58.7	57.4	58.9	59.5	59.4	59.6	60.2
Unemployed	1,013	953	884	931	855	789	874	893	813
Unemployment rate	12.9	11.5	10.6	11.8	10.4	9.6	10.5	10.6	9.6

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

[Numbers in thousands]

Category	Not seasonally adjusted			Seasonally adjusted					
	Feb. 1986	Jan. 1987	Feb. 1987	Feb. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987
CHARACTERISTIC									
Civilian employed, 16 years and over	106,685	109,084	109,464	108,557	110,192	110,432	110,637	111,011	111,382
Married men, spouse present	38,791	39,621	39,354	39,363	39,780	39,952	40,093	40,102	39,913
Married women, spouse present	26,513	27,470	27,622	26,695	27,323	27,333	27,400	27,525	27,817
Women who maintain families	5,739	5,961	5,924	5,723	6,016	6,041	6,005	5,985	5,906
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,261	1,335	1,375	1,512	1,562	1,582	1,621	1,650	1,647
Self-employed workers	1,287	1,271	1,297	1,444	1,451	1,425	1,400	1,370	1,454
Unpaid family workers	115	99	92	158	164	198	152	136	126
Nonagricultural industries:									
Wage and salary workers	96,225	98,100	98,456	97,500	98,846	98,869	99,164	99,550	99,748
Government	16,490	16,510	16,879	16,155	16,264	16,457	16,443	16,412	16,532
Private industries	79,735	81,591	81,576	81,345	82,582	82,412	82,721	83,138	83,216
Private households	1,132	1,160	1,128	1,208	1,216	1,183	1,189	1,269	1,204
Other industries	78,603	80,431	80,448	80,137	81,366	81,229	81,532	81,869	82,012
Self-employed workers	7,554	8,045	8,007	7,711	7,993	8,179	8,056	8,192	8,1[illegible]7
Unpaid family workers	242	233	237	261	265	252	239	246	255
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,269	5,538	5,583	5,446	5,760	5,563	5,596	5,505	5,780
Slack work	2,540	2,770	2,692	2,385	2,481	2,510	2,444	2,473	2,535
Could only find part-time work	2,457	2,479	2,548	2,724	2,826	2,714	2,867	2,695	2,828
Voluntary part time	14,646	14,453	14,947	13,800	14,178	14,021	13,877	14,170	14,061
Nonagricultural industries:									
Part time for economic reasons	5,101	5,263	5,328	5,214	5,450	5,319	5,342	5,201	5,459
Slack work	2,402	2,557	2,499	2,242	2,3[illegible]4	2,366	2,286	2,281	2,340
Could only find part-time work	2,436	2,425	2,501	2,669	2,7[illegible]9	2,626	2,765	2,599	2,742
Voluntary part time	14,265	14,080	14,535	13,354	13,[illegible]6	13,567	13,455	13,758	13,597

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

[Percent]

Measure		Quarterly averages					Monthly data		
		198	1986				1986	1987	
		IV	I	II	III	IV	Dec.	Jan.	Feb.
U-1	Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8
U-2	Job losers as a percent of the civilian labor force	3.5	3.5	3.5	3.4	3.3	3.3	3.3	3.2
U-3	Unemployed persons 25 years and over as a percent of the civilian labor force	5.4	5.5	5.5	5.4	5.4	5.2	5.2	5.1
U-4	Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.7	6.7	6.8	6.6	6.5	6.3	6.4	6.3
U-5a	Total unemployed as a percent of the labor force, including the resident Armed Forces	7.0	7.0	7.0	6.8	6.8	6.6	6.6	6.6
U-5b	Total unemployed as a percent of the civilian labor force	7.1	7.1	7.1	6.9	6.7	6.7	6.7	6.7
U-6	Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.5	9.4	9.6	9.3	9.2	9.1	9.1	9.1
U-7	Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.4	10.4	10.5	10.2	10.2	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Feb. 1986	Jan. 1987	Feb. 1987	Feb. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987
CHARACTERISTIC									
Total, 16 years and over	8,485	8,023	7,967	7.2	6.9	6.9	6.7	6.7	6.7
Men, 16 years and over	4,595	4,484	4,429	7.0	7.0	6.9	6.7	6.8	6.7
Men, 20 years and over	3,796	3,720	3,648	6.2	6.2	6.2	6.0	6.0	5.9
Women, 16 years and over	3,890	3,538	3,538	7.5	6.9	6.9	6.7	6.7	6.7
Women, 20 years and over	3,189	2,900	2,873	6.6	6.1	6.1	5.9	5.9	5.8
Both sexes, 16 to 19 years	1,500	1,402	1,446	18.9	17.7	18.2	17.3	17.7	18.0
Married men, spouse present	1,839	1,772	1,743	4.5	4.6	4.5	4.3	4.2	4.2
Married women, spouse present	1,558	1,392	1,412	5.5	5.0	5.0	4.8	4.8	4.8
Women who maintain families	628	647	620	9.9	8.9	9.7	9.8	9.8	9.5
Full-time workers	6,898	6,534	6,488	6.9	6.6	6.6	6.3	6.4	6.3
Part-time workers	1,547	1,529	1,449	9.3	9.2	9.1	8.8	9.0	8.7
Labor force time lost[2]	--	--	--	8.1	7.8	7.7	7.6	7.6	7.6
INDUSTRY									
Nonagricultural private wage and salary workers	6,328	6,007	5,898	7.2	7.0	7.0	6.8	6.7	6.6
Mining	97	136	107	9.5	14.5	14.5	14.1	14.0	12.4
Construction	793	784	719	13.0	13.8	15.1	13.7	12.2	11.6
Manufacturing	1,609	1,470	1,479	7.3	7.3	7.1	6.9	6.8	6.8
Durable goods	986	889	883	7.4	7.2	6.6	6.4	6.8	6.8
Nondurable goods	623	581	596	7.1	7.3	7.9	7.7	6.8	6.9
Transportation and public utilities	328	301	247	5.3	5.2	4.4	4.6	4.8	4.0
Wholesale and retail trade	1,750	1,701	1,680	7.8	7.4	7.2	7.2	7.5	7.2
Finance and service industries	1,751	1,615	1,665	5.9	5.4	5.4	5.1	5.2	5.4
Government workers	637	613	640	3.8	3.7	3.6	3.3	3.6	3.7
Agricultural wage and salary workers	243	216	207	13.8	11.9	10.1	11.5	11.6	11.2

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Feb. 1986	Jan. 1987	Feb. 1987	Feb. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987
DURATION									
Less than 5 weeks	3,377	3,693	3,216	3,534	3,418	3,382	3,355	3,416	3,361
5 to 14 weeks	3,118	2,639	2,957	2,615	2,563	2,613	2,389	2,530	2,477
15 weeks and over	2,546	2,288	2,329	2,332	2,168	2,217	2,171	2,200	2,131
15 to 26 weeks	1,311	1,105	1,166	1,142	950	1,045	1,023	1,022	1,008
27 weeks and over	1,234	1,183	1,163	1,190	1,218	1,172	1,148	1,178	1,123
Average (mean) duration, in weeks	15.3	14.4	14.7	15.2	15.2	14.8	15.0	15.0	14.6
Median duration, in weeks	7.7	6.8	7.4	6.9	7.0	7.0	7.1	7.0	6.6
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	37.4	42.8	37.8	41.7	41.9	41.2	42.4	41.9	42.2
5 to 14 weeks	34.5	30.6	34.8	30.8	31.5	31.8	30.2	31.1	31.1
15 weeks and over	28.2	26.5	27.4	27.5	26.6	27.0	27.4	27.0	26.7
15 to 26 weeks	14.5	12.8	13.7	13.5	11.7	12.7	12.9	12.5	12.7
27 weeks and over	13.6	13.7	13.7	14.0	14.5	14.3	14.5	14.5	14.1

Table A-8. Reason for unemployment

(Numbers in thousands)

Reason	Not seasonally adjusted			Seasonally adjusted					
	Feb. 1986	Jan. 1987	Feb. 1987	Feb. 1986	Oct. 1986	Nov. 1984	Dec. 1986	Jan. 1987	Feb. 1987
NUMBER OF UNEMPLOYED									
Job losers	4,820	4,662	4,469	4,147	3,984	3,947	3,890	3,971	3,839
On layoff	1,512	1,350	1,335	1,136	1,072	1,073	1,078	1,118	998
Other job losers	3,308	3,112	3,134	3,011	2,912	2,874	2,812	2,854	2,842
Job leavers	995	952	1,058	985	1,027	1,056	1,036	891	1,046
Reentrants	2,278	2,087	2,058	2,263	2,190	2,119	2,019	2,054	2,042
New entrants	947	918	918	1,073	972	1,076	1,015	1,084	1,040
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.3	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	53.3	54.1	52.6	49.0	48.7	48.1	48.9	49.6	48.2
On layoff	16.7	18.0	15.7	13.4	13.1	13.1	13.5	14.0	12.5
Other job losers	36.6	36.1	36.9	35.6	35.6	35.1	35.3	35.7	35.7
Job leavers	11.0	11.0	12.4	11.6	12.6	12.9	13.0	11.1	13.1
Reentrants	25.2	24.2	24.2	26.7	26.8	25.8	25.4	25.7	25.6
New entrants	10.5	10.7	10.1	12.7	11.9	13.1	12.8	13.6	13.1
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	4.2	3.9	3.8	3.5	3.4	3.3	3.3	3.3	3.2
Job leavers	.9	.8	.9	.8	.9	.9	.9	.7	.9
Reentrants	2.0	1.8	1.7	1.9	1.8	1.8	1.7	1.7	1.7
New entrants	.8	.8	.8	.9	.8	.9	.9	.9	.9

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Feb. 1986	Jan. 1987	Feb. 1987	Feb. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987
Total, 16 years and over	8,485	8,023	7,967	7.2	6.9	6.9	6.7	6.7	6.7
16 to 24 years	3,206	3,045	3,049	13.6	13.0	12.9	12.9	13.1	13.1
16 to 19 years	1,500	1,402	1,446	18.9	17.7	18.2	17.3	17.7	18.0
16 to 17 years	704	683	693	21.6	19.3	20.6	18.8	20.1	20.3
18 to 19 years	806	735	765	17.1	16.5	16.7	16.3	16.2	16.6
20 to 24 years	1,706	1,643	1,603	10.9	10.5	10.2	10.7	10.7	10.5
25 years and over	5,275	5,024	4,912	5.6	5.5	5.5	5.2	5.2	5.1
25 to 54 years	4.641	4,552	4,459	5.9	5.7	5.8	5.5	5.6	5.5
55 years and over	631	477	452	4.3	4.1	3.8	3.5	3.2	3.0
Men, 16 years and over	4,595	4,484	4,429	7.0	7.0	6.9	6.7	6.8	6.7
16 to 24 years	1,694	1,626	1,673	13.6	13.2	13.4	13.4	13.4	13.6
16 to 19 years	799	764	781	19.5	18.2	18.3	17.8	18.5	18.6
16 to 17 years	395	380	383	22.9	19.8	21.3	19.1	21.4	21.2
18 to 19 years	414	401	410	17.2	17.0	16.2	17.0	16.9	17.0
20 to 24 years	895	862	892	10.8	10.7	10.9	11.3	10.7	11.1
25 years and over	2,906	2,901	2,760	5.5	5.5	5.5	5.2	5.4	5.1
25 to 54 years	2,528	2,578	2,461	5.7	5.7	5.7	5.5	5.7	5.4
55 years and over	373	310	293	4.3	4.4	4.1	4.0	3.5	3.3
Women, 16 years and over	3,890	3,538	3,538	7.5	6.9	6.9	6.7	6.7	6.7
16 to 24 years	1,512	1,419	1,375	13.5	12.7	12.4	12.4	12.7	12.4
16 to 19 years	701	638	665	18.3	17.2	18.2	16.8	16.8	17.4
16 to 17 years	309	303	310	20.1	18.6	19.8	18.4	18.7	19.2
18 to 19 years	392	334	355	17.1	16.0	17.2	15.7	15.3	16.1
20 to 24 years	811	781	710	11.0	10.3	9.4	10.0	10.6	9.8
25 years and over	2,369	2,124	2,152	5.8	5.4	5.8	5.2	5.1	5.1
25 to 54 years	2,113	1,974	1,998	6.1	5.7	5.8	5.5	5.5	5.6
55 years and over	258	167	158	4.3	3.6	3.4	2.9	2.7	2.6

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[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1986	Jan. 1987	Feb. 1987	Feb. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987
Civilian noninstitutional population	24,932	25,515	25,567	24,932	25,330	25,385	25,436	25,515	25,567
Civilian labor force	15,627	16,042	16,158	15,867	16,148	16,192	16,157	16,384	16,407
Participation rate	62.7	62.9	63.2	63.6	63.8	63.8	63.5	64.2	64.2
Employed	13,540	14,047	14,087	13,749	14,097	14,137	14,170	14,316	14,306
Employment-population ratio[2]	54.3	55.1	55.1	55.1	55.7	55.7	55.7	56.1	56.0
Unemployed	2,086	1,994	2,071	2,118	2,051	2,055	1,987	2,068	2,101
Unemployment rate	13.4	12.4	12.8	13.3	12.7	12.7	12.3	12.6	12.8
Not in labor force	9,306	9,473	9,409	9,065	9,182	9,193	9,279	9,131	9,160

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Feb. 1986	Feb. 1987	Feb. 1986	Feb. 1987	Feb. 1986	Feb. 1987
Total, 16 years and over[1]	106,685	109,464	9,041	8,503	7.8	7.2
Managerial and professional specialty	26,094	27,246	633	694	2.4	2.5
Executive, administrative, and managerial	12,246	12,725	362	360	2.9	2.8
Professional specialty	13,847	14,521	271	334	1.9	2.2
Technical, sales, and administrative support	33,704	34,519	1,871	1,680	5.3	4.6
Technicians and related support	3,364	3,163	138	135	3.9	4.1
Sales occupations	12,693	13,181	824	754	6.1	5.4
Administrative support, including clerical	17,647	18,175	910	791	4.9	4.2
Service occupations	14,610	14,835	1,470	1,373	9.1	8.5
Private household	962	917	67	71	6.5	7.2
Protective service	1,755	1,875	108	90	5.8	4.6
Service, except private household and protective	11,893	12,044	1,295	1,213	9.8	9.1
Precision production, craft, and repair	12,835	13,232	1,347	1,135	9.5	7.9
Mechanics and repairers	4,414	4,477	276	215	5.9	4.6
Construction trades	4,497	4,790	759	656	14.4	12.0
Other precision production, craft, and repair	3,923	3,965	311	264	7.4	6.2
Operators, fabricators, and laborers	16,699	16,803	2,345	2,318	12.3	12.1
Machine operators, assemblers, and inspectors	7,822	7,653	938	960	10.7	11.1
Transportation and material moving occupations	4,361	4,596	577	515	11.7	10.1
Handlers, equipment cleaners, helpers, and laborers	4,516	4,554	831	844	15.5	15.6
Construction laborers	605	561	223	235	27.0	29.5
Other handlers, equipment cleaners, helpers, and laborers	3,911	3,994	607	609	13.4	13.2
Farming, forestry, and fishing	2,743	2,828	387	333	12.4	10.5

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Feb. 1986	Feb. 1987	Feb. 1986	Feb. 1987	Feb. 1986	Feb. 1987	Feb. 1986	Feb. 1987	Feb. 1986	Feb. 1987
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,700	7,804	7,142	7,189	6,680	6,809	462	380	6.5	5.3
30 to 44 years	6,416	6,275	6,128	5,986	5,711	5,660	417	326	6.8	5.4
30 to 34 years	1,253	1,007	1,183	943	1,072	863	111	80	9.4	8.5
35 to 39 years	3,134	2,781	3,011	2,664	2,796	2,522	215	142	7.1	5.3
40 to 44 years	2,029	2,487	1,934	2,379	1,843	2,275	91	104	4.7	4.4
45 years and over	1,284	1,529	1,014	1,203	969	1,149	45	54	4.4	4.5
NONVETERANS										
Total, 30 to 44 years	17,998	19,078	16,982	18,053	15,874	16,966	1,108	1,087	6.5	6.0
30 to 34 years	8,250	8,728	7,835	8,293	7,306	7,743	529	550	6.8	6.6
35 to 39 years	5,543	6,026	5,238	5,707	4,926	5,384	312	323	6.0	5.7
40 to 44 years	4,205	4,324	3,909	4,053	3,642	3,839	267	214	6.8	5.3

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted¹			Seasonally adjusted²					
	Feb. 1986	Jan. 1987	Feb. 1987	Feb. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987
California									
Civilian noninstitutional population	19,944	20,364	20,401	19,944	20,242	20,275	20,314	20,364	20,401
Civilian labor force	13,188	13,382	13,563	13,254	13,491	13,540	13,476	13,403	13,626
Employed	12,169	12,464	12,654	12,300	12,598	12,625	12,569	12,568	12,779
Unemployed	1,019	917	909	954	893	915	907	835	847
Unemployment rate	7.7	6.9	6.7	7.2	6.6	6.8	6.7	6.2	6.2
Florida									
Civilian noninstitutional population	9,074	9,312	9,333	9,074	9,244	9,263	9,285	9,312	9,333
Civilian labor force	5,391	5,666	5,722	5,448	5,679	5,724	5,726	5,729	5,775
Employed	5,101	5,338	5,422	5,130	5,368	5,404	5,449	5,396	5,446
Unemployed	290	328	300	318	311	320	277	333	329
Unemployment rate	5.4	5.8	5.2	5.8	5.5	5.6	4.8	5.8	5.7
Illinois									
Civilian noninstitutional population	8,649	8,674	8,676	8,649	8,664	8,664	8,667	8,674	8,676
Civilian labor force	5,632	5,583	5,561	5,700	5,678	5,640	5,643	5,620	5,633
Employed	5,063	5,124	5,097	5,162	5,252	5,222	5,223	5,205	5,199
Unemployed	569	459	464	538	426	418	420	415	434
Unemployment rate	10.1	8.2	8.3	9.4	7.5	7.4	7.4	7.4	7.7
Massachusetts									
Civilian noninstitutional population	4,545	4,563	4,565	4,545	4,557	4,557	4,559	4,563	4,565
Civilian labor force	3,009	3,020	3,002	3,049	3,047	3,043	3,052	3,052	3,040
Employed	2,881	2,897	2,884	2,934	2,929	2,922	2,950	2,946	2,935
Unemployed	128	123	117	115	118	121	102	106	105
Unemployment rate	4.3	4.1	3.9	3.8	3.9	4.0	3.3	3.5	3.5
Michigan									
Civilian noninstitutional population	6,835	6,897	6,903	6,835	6,878	6,882	6,888	6,897	6,903
Civilian labor force	4,288	4,416	4,431	4,333	4,441	4,472	4,497	4,496	4,474
Employed	3,888	4,059	4,038	3,946	4,065	4,099	4,135	4,163	4,092
Unemployed	400	358	393	387	376	373	362	333	382
Unemployment rate	9.3	8.1	8.9	8.9	8.5	8.3	8.0	7.4	8.5
New Jersey									
Civilian noninstitutional population	5,900	5,956	5,961	5,900	5,939	5,942	5,948	5,956	5,961
Civilian labor force	3,872	3,813	3,895	3,889	3,876	3,914	3,900	3,857	3,908
Employed	3,625	3,639	3,707	3,666	3,674	3,737	3,727	3,718	3,746
Unemployed	247	174	188	223	202	177	173	139	162
Unemployment rate	6.4	4.6	4.8	5.7	5.2	4.5	4.4	3.6	4.1
New York									
Civilian noninstitutional population	13,716	13,759	13,762	13,716	13,742	13,742	13,747	13,759	13,762
Civilian labor force	8,299	8,499	8,389	8,387	8,387	8,378	8,423	8,511	8,484
Employed	7,689	7,976	7,923	7,824	7,907	7,895	7,921	8,009	8,065
Unemployed	610	524	466	563	480	483	502	502	419
Unemployment rate	7.3	6.2	5.6	6.7	5.7	5.8	6.0	5.9	4.9
North Carolina									
Civilian noninstitutional population	4,726	4,802	4,809	4,726	4,780	4,785	4,792	4,802	4,809
Civilian labor force	3,173	3,227	3,259	3,204	3,206	3,201	3,221	3,271	3,290
Employed	2,991	3,058	3,078	3,037	3,041	3,029	3,048	3,115	3,122
Unemployed	181	169	181	167	165	172	173	156	168
Unemployment rate	5.7	5.2	5.6	5.2	5.1	5.4	5.4	4.8	5.1
Ohio									
Civilian noninstitutional population	8,096	8,122	8,124	8,096	8,112	8,112	8,115	8,122	8,124
Civilian labor force	5,220	5,196	5,205	5,325	5,214	5,264	5,276	5,287	5,333
Employed	4,747	4,744	4,732	4,869	4,810	4,875	4,861	4,850	4,874
Unemployed	473	452	473	456	404	389	415	437	459
Unemployment rate	9.1	8.7	9.1	8.6	7.7	7.4	7.9	8.3	8.6
Pennsylvania									
Civilian noninstitutional population	9,224	9,262	9,266	9,224	9,249	9,250	9,254	9,262	9,266
Civilian labor force	5,511	5,490	5,427	5,643	5,597	5,557	5,528	5,510	5,561
Employed	5,059	5,131	5,078	5,236	5,244	5,212	5,229	5,267	5,255
Unemployed	453	359	349	407	353	345	299	243	306
Unemployment rate	8.2	6.5	6.4	7.2	6.3	6.2	5.4	4.4	5.5
Texas									
Civilian noninstitutional population	11,902	12,115	12,134	11,902	12,052	12,069	12,089	12,115	12,134
Civilian labor force	7,945	8,209	8,226	8,026	8,288	8,301	8,354	8,293	8,315
Employed	7,248	7,402	7,468	7,365	7,506	7,508	7,550	7,497	7,592
Unemployed	697	807	759	661	782	793	804	796	723
Unemployment rate	8.8	9.8	9.2	8.2	9.4	9.6	9.6	9.6	8.7

¹ These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

² The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Feb. 1986	Dec. 1986	Jan. 1987 p	Feb. 1987 p	Feb. 1986	Oct. 1986	Nov. 1985	Dec. 1986	Jan. 1987 p	Feb. 1987 p
Total	98,113	101,975	100,200	100,610	99,429	100,826	101,068	101,322	101,641	101,978
Total private	81,165	84,816	83,319	83,423	82,748	83,956	84,178	84,396	84,738	85,062
Goods-producing	24,358	24,837	24,408	24,360	25,038	24,865	24,891	24,920	25,009	25,059
Mining	868	738	726	717	[illegible]	746	742	738	729	727
Oil and gas extraction	542.2	421.1	416.3	408.5	541	[illegible]	420	414	[illegible]	408
Construction	4,353	4,926	4,673	4,574	4,866	5,001	4,993	4,996	5,109	5,111
General building contractors	1,197.2	1,288.8	1,236.0	1,208.2	1,320	1,302	1,307	1,298	1,333	1,331
Manufacturing	19,137	19,173	19,009	19,069	19,294	19,118	19,156	19,186	19,171	19,221
Production workers	12,973	13,043	12,892	12,958	13,097	12,974	13,020	13,053	13,03'	13,084
Durable goods	11,381	11,289	11,203	11,246	11,455	11,266	11,282	11,289	11,273	11,316
Production workers	7,525	7,466	7,390	7,438	7,579	7,435	7,452	7,466	7,446	7,493
Lumber and wood products	690.6	735.5	726.6	730.1	716	737	743	749	755	757
Furniture and fixtures	495.2	505.4	503.7	504.6	494	[illegible]	500	500	503	503
Stone, clay, and glass products	571.3	586.4	574.2	572.0	597	590	591	594	596	598
Primary metal industries	794.8	746.1	743.2	762.0	795	749	751	752	742	762
Blast furnaces and basic steel products	298.0	266.9	264.4	281.0	299	272	271	270	264	282
Fabricated metal products	1,442.8	1,435.5	1,423.2	1,421.2	1,452	1,429	1,427	1,431	1,430	1,430
Machinery, except electrical	2,126.7	2,031.9	2,027.3	2,042.2	2,127	2,039	2,036	2,030	2,031	2,042
Electrical and electronic equipment	2,176.3	2,166.4	2,157.0	2,154.0	2,181	2,167	2,166	2,164	2,157	2,158
Transportation equipment	1,997.6	2,003.7	1,979.4	1,992.3	1,998	1,979	1,993	1,990	1,979	1,990
Motor vehicles and equipment	861.3	842.9	819.9	833.2	864	824	837	832	823	836
Instruments and related products	722.8	709.6	707.5	704.2	725	713	710	709	710	706
Miscellaneous manufacturing	363.3	368.3	360.5	363.5	370	363	365	370	370	370
Nondurable goods	7,756	7,884	7,806	7,823	7,839	7,852	7,874	7,897	7,898	7,905
Production workers	5,448	5,577	5,502	5,520	5,518	5,539	5,568	5,587	5,585	5,591
Food and kindred products	1,574.3	1,647.0	1,603.0	1,597.6	1,631	1,644	1,654	1,657	1,653	1,654
Tobacco manufactures	63.0	62.3	61.1	59.4	63	59	61	60	59	60
Textile mill products	700.4	719.5	717.5	719.8	705	711	717	719	721	725
Apparel and other textile products	1,123.2	1,119.1	1,105.7	1,116.0	1,122	1,113	1,112	1,124	1,120	1,115
Paper and allied products	682.1	696.8	690.3	690.2	687	694	694	697	694	695
Printing and publishing	1,465.2	1,502.2	1,497.3	1,502.5	1,467	1,491	1,493	1,493	1,499	1,504
Chemicals and allied products	1,028.3	1,017.8	1,014.4	1,016.9	1,032	1,023	1,023	1,020	1,022	1,021
Petroleum and coal products	163.3	156.8	156.0	155.7	167	161	160	159	159	159
Rubber and miscellaneous plastics products	797.6	810.5	811.4	814.2	803	805	809	815	819	819
Leather and leather products	158.7	152.4	149.3	150.5	162	151	151	153	152	153
Service-producing	73,755	77,138	75,792	76,250	74,391	75,961	76,177	76,402	76,632	76,919
Transportation and public utilities	5,206	5,390	5,308	5,310	5,277	5,316	5,351	5,359	5,378	5,383
Transportation	2,990	3,156	3,084	3,088	3,048	3,094	3,117	3,125	3,141	3,148
Communication and public utilities	2,216	2,234	2,224	2,222	2,229	2,222	2,234	2,234	2,237	2,235
Wholesale trade	5,794	5,866	5,829	5,828	5,843	5,864	5,859	5,859	5,867	5,878
Durable goods	3,461	3,491	3,478	3,473	3,482	3,489	3,489	3,491	3,495	3,494
Nondurable goods	2,333	2,375	2,351	2,355	2,361	2,375	2,370	2,368	2,372	2,384
Retail trade	17,315	18,807	18,066	17,954	17,795	18,143	18,197	18,206	18,323	18,452
General merchandise stores	2,253.4	2,641.0	2,419.8	2,332.0	2,333	2,379	2,367	2,341	2,361	2,417
Food stores	2,868.3	3,041.7	2,984.4	2,986.4	2,891	2,963	2,968	2,979	2,990	3,010
Automotive dealers and service stations	1,908.9	1,970.6	1,972.6	1,965.9	1,938	1,973	1,977	1,984	1,991	1,996
Eating and drinking places	5,584.3	5,980.3	5,781.0	5,808.5	5,854	5,982	6,006	6,035	6,072	6,089
Finance, insurance, and real estate	6,103	6,456	6,445	6,455	6,157	6,409	6,429	6,472	6,496	6,512
Finance	3,073	3,233	3,234	3,238	3,082	3,212	3,220	3,236	3,240	3,248
Insurance	1,887	1,988	1,998	2,004	1,889	1,971	1,979	1,990	2,002	2,006
Real estate	1,143	1,235	1,213	1,213	1,186	1,226	1,230	1,246	1,254	1,258
Services	22,389	23,460	23,263	23,516	22,638	23,339	23,451	23,578	23,665	23,778
Business services	4,602.2	4,986.1	4,919.6	4,943.6	4,687	4,908	4,926	4,966	4,989	5,034
Health services	5,451.1	6,712.3	6,739.9	6,764.3	6,471	6,677	6,695	6,726	6,753	6,785
Government	16,948	17,159	16,881	17,187	16,681	16,870	16,890	16,920	16,903	16,916
Federal	2,898	2,895	2,882	2,897	2,918	2,896	2,899	2,907	2,908	2,917
State	4,014	4,055	3,943	4,068	3,924	3,959	3,965	3,983	3,979	3,977
Local	10,036	10,209	10,056	10,222	9,839	10,015	10,026	10,030	10,016	10,022

p = preliminary.

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Feb. 1986	Dec. 1986	Jan. 1987 p	Feb. 1987 p	Feb. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987 p	Feb. 1987 p
Total private	34.4	34.9	34.4	34.6	34.9	34.7	34.8	34.6	34.8	35.0
Mining	42.4	42.6	42.4	42.5	(2)	(2)	(2)	(2)	(2)	(2)
Construction	35.2	36.9	37.3	36.8	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.3	41.6	40.8	40.7	40.7	40.7	40.8	40.8	40.9	41.2
Overtime hours	3.2	3.8	3.5	3.5	3.4	3.5	3.5	3.5	3.6	3.6
Durable goods	41.0	42.2	41.4	41.4	41.4	41.3	41.4	41.3	41.6	41.8
Overtime hours	3.4	4.0	3.5	3.6	3.5	3.6	3.6	3.6	3.6	3.7
Lumber and wood products	39.3	40.5	40.0	40.3	40.0	40.3	40.7	40.4	40.7	41.0
Furniture and fixtures	38.9	40.9	39.4	39.2	39.7	39.8	39.6	39.6	40.0	40.0
Stone, clay, and glass products	40.6	42.0	41.8	42.0	41.9	42.3	41.9	42.1	43.0	43.3
Primary metal industries	42.1	43.0	42.6	42.6	42.1	42.3	42.4	42.5	42.7	42.6
Blast furnaces and basic steel products	41.9	42.7	42.2	42.0	41.8	42.3	42.5	42.7	42.7	41.9
Fabricated metal products	41.0	42.1	41.4	41.2	41.5	41.2	41.4	41.1	41.5	41.7
Machinery, except electrical	41.5	42.7	41.9	42.0	41.6	41.6	41.7	41.5	41.9	42.1
Electrical and electronic equipment	40.6	42.1	41.0	40.9	40.9	40.9	41.0	41.0	40.9	41.3
Transportation equipment	42.4	43.4	42.5	42.4	42.7	42.1	42.3	42.1	42.3	42.7
Motor vehicles and equipment	42.9	44.0	43.2	43.2	43.4	42.1	42.6	42.6	43.2	43.7
Instruments and related products	41.0	42.3	41.2	41.0	41.2	41.1	41.2	41.3	41.2	41.2
Miscellaneous manufacturing	39.3	40.3	39.5	39.4	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	39.2	40.7	40.0	39.9	39.7	39.9	40.1	40.1	40.1	40.3
Overtime hours	3.0	3.6	3.4	3.3	3.2	3.4	3.5	3.5	3.5	3.5
Food and kindred products	39.0	40.4	39.9	39.3	39.8	39.8	40.0	39.8	40.1	40.1
Tobacco manufactures	36.6	37.7	37.2	34.3	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	40.2	42.4	41.7	41.7	40.6	41.5	41.5	41.9	41.8	42.2
Apparel and other textile products	35.8	37.4	36.8	37.0	36.3	36.7	36.9	37.0	36.9	37.5
Paper and allied products	43.0	44.2	43.5	43.1	43.5	43.0	43.2	43.4	43.6	43.6
Printing and publishing	37.6	38.8	37.5	37.7	38.0	38.0	38.1	38.1	37.8	38.1
Chemicals and allied products	41.7	42.7	42.3	42.4	41.8	42.2	42.5	42.2	42.3	42.5
Petroleum and coal products	43.1	43.7	45.2	44.6	43.7	43.7	43.8	43.6	45.5	45.2
Rubber and miscellaneous plastics products	41.0	42.3	41.6	41.2	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	36.0	38.1	37.3	37.5	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	39.2	39.2	38.7	39.2	39.5	39.1	39.3	39.0	39.1	39.5
Wholesale trade	38.0	38.4	38.1	38.1	38.4	38.4	38.3	38.2	38.3	38.5
Retail trade	28.6	29.5	28.3	28.7	29.3	29.1	29.3	28.9	28.9	29.4
Finance, insurance, and real estate	36.8	36.6	36.5	36.7	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.4	32.4	32.2	32.3	32.6	32.4	32.5	32.4	32.4	32.5

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[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Feb. 1986	Dec. 1986	Jan. 1987 p	Feb. 1987 p	Feb. 1986	Dec. 1986	Jan. 1987 p	Feb. 1987 p
Total private	$8.74	$8.83	$8.87	$8.89	$300.66	$308.17	$305.13	$307.59
Seasonally adjusted	8.71	8.82	8.83	8.87	303.98	305.17	307.28	310.45
Mining	12.32	12.60	12.62	12.51	522.37	536.76	535.09	531.68
Construction	12.35	12.70	12.53	12.48	434.72	468.63	467.37	459.26
Manufacturing	9.70	9.84	9.83	9.85	390.91	409.34	401.06	400.90
Durable goods	10.29	10.40	10.38	10.41	421.89	438.88	429.73	430.97
Lumber and wood products	8.36	8.36	8.31	8.37	328.55	338.58	332.40	337.31
Furniture and fixtures	7.31	7.60	7.55	7.52	284.36	310.84	297.47	294.78
Stone, clay, and glass products	9.94	10.17	10.17	10.17	403.56	427.14	425.11	427.14
Primary metal industries	11.96	11.91	11.86	11.95	503.52	512.13	505.24	509.07
Blast furnaces and basic steel products	13.81	13.83	13.66	13.79	578.64	590.54	576.45	579.18
Fabricated metal products	9.85	10.00	9.98	9.99	403.85	421.00	413.17	411.59
Machinery, except electrical	10.53	10.65	10.60	10.66	437.00	454.76	444.14	447.72
Electrical and electronic equipment	9.60	9.85	9.87	9.87	389.76	414.69	404.67	403.68
Transportation equipment	12.87	13.00	12.96	12.98	545.69	564.20	550.80	550.35
Motor vehicles and equipment	13.59	13.63	13.66	13.64	583.01	599.72	590.11	589.25
Instruments and related products	9.39	9.62	9.61	9.64	384.99	406.93	395.93	395.24
Miscellaneous manufacturing	7.50	7.71	7.71	7.65	294.75	310.71	304.55	301.41
Nondurable goods	8.86	9.06	9.08	9.07	347.31	368.74	363.20	361.89
Food and kindred products	8.71	8.88	8.91	8.93	339.69	358.75	355.51	350.95
Tobacco manufactures	12.38	12.86	12.99	13.31	453.11	484.82	483.23	456.53
Textile mill products	6.83	7.13	7.11	7.11	274.57	302.31	296.49	296.49
Apparel and other textile products	5.79	5.86	5.89	5.89	207.28	219.16	216.75	217.93
Paper and allied products	10.99	11.24	11.18	11.16	472.57	496.81	486.33	481.00
Printing and publishing	9.86	10.14	10.16	10.20	370.74	393.43	381.00	384.54
Chemicals and allied products	11.81	12.20	12.18	12.20	492.48	520.94	515.21	517.28
Petroleum and coal products	14.21	14.36	14.43	14.27	612.45	627.53	652.24	636.44
Rubber and miscellaneous plastics products	8.69	8.86	8.88	8.84	356.29	374.78	369.41	364.21
Leather and leather products	5.83	5.98	6.04	6.03	209.88	227.84	225.29	226.13
Transportation and public utilities	11.64	11.71	11.67	11.76	456.29	459.03	451.63	460.99
Wholesale trade	9.36	9.47	9.48	9.50	355.68	363.65	361.19	361.95
Retail trade	6.04	6.05	6.07	6.06	172.74	178.48	171.78	173.92
Finance, insurance, and real estate	8.28	8.46	8.58	8.73	304.70	309.64	313.17	320.39
Services	8.17	8.31	8.36	8.40	264.71	269.24	269.19	[illegible]1.32

[1] See footnote 1, table B-2.

p = preliminary.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Feb. 1986	Dec. 1986	Jan. 1987p	Feb. 1987p	Percent change from: Feb. 1986-Feb. 1987	Feb. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987p	Feb. 1987p	Percent change from: Jan. 1987-Feb. 1987
Total private nonfarm:												
Current dollars	168.6	171.1	171.2	171.8	1.9	168.2	170.0	170.8	170.6	170.6	171.4	0.5
Constant (1977) dollars	94.6	95.4	94.8	N.A.	(2)	94.4	95.0	95.3	95.0	94.3	N.A.	(3)
Mining	180.5	181.9	181.5	180.1	-.2	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	149.7	154.4	152.0	151.4	1.1	149.7	152.6	154.0	153.9	151.7	151.4	-.2
Manufacturing	171.6	173.8	174.2	174.4	1.6	171.3	173.1	173.2	173.5	173.5	174.1	.3
Transportation and public utilities	170.3	172.2	171.7	173.5	1.9	169.6	170.9	171.2	171.2	171.1	172.8	1.0
Wholesale trade	172.4	174.5	174.8	175.1	1.6	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	157.7	158.8	158.4	158.8	.7	157.3	159.1	159.3	159.3	158.1	158.3	.1
Finance, insurance, and real estate	178.8	182.2	184.5	187.6	4.9	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	173.8	177.0	177.9	178.9	2.[illegible]	[illegible]	[illegible]	176.6	175.8	176.8	17[illegible]	[illegible]

1 See footnote 1, table B-2.
2 Percent change is 0.9 percent from January 1986 to January 1987, the latest month available.
3 Percent change is -0.7 percent from December 1986 to January 1987, the latest month available.
4 These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
N.A. Data not available
p = preliminary

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Feb. 1986	Dec. 1986	Jan. 1987 p	Feb. 1987 p	Feb. 1986	Oct. 1986	Nov. 1986	Dec. 1986	Jan. 1987 p	Feb. 1987 p
Total	113.4	120.6	116.3	116.9	117.5	118.6	119.3	119.0	119.8	121.1
Goods-producing	94.0	99.8	96.3	95.8	98.8	98.5	98.8	99.0	100.3	100.9
Mining	96.7	82.7	79.9	79.4	99.3	82.1	81.1	81.4	79.9	81.6
Construction	105.7	128.5	121.4	116.3	126.3	133.0	131.8	132.2	139.9	138.6
Manufacturing	91.6	95.1	92.3	92.6	93.5	92.6	93.3	93.4	93.6	94.5
Durable goods	90.6	92.6	89.9	90.4	92.1	90.1	90.6	90.5	90.8	91.9
Lumber and wood products	92.7	101.5	98.5	99.9	98.1	101.4	103.3	103.2	104.3	105.5
Furniture and fixtures	103.3	111.3	106.8	106.3	104.9	107.3	106.3	106.5	107.9	108.2
Stone, clay, and glass products	80.5	86.3	83.5	84.0	87.4	87.3	86.7	87.7	89.9	91.1
Primary metal industries	66.7	63.0	62.1	64.1	66.8	62.2	62.6	62.9	62.0	64.1
Blast furnaces and basic steel products	55.1	48.7	47.5	51.0	55.1	49.7	49.3	49.5	48.0	51.0
Fabricated metal products	89.0	91.2	88.5	88.1	90.6	88.6	89.0	88.8	89.4	89.8
Machinery, except electrical	89.6	87.3	85.7	87.0	89.6	85.3	85.1	84.6	85.7	86.9
Electrical and electronic equipment	102.5	105.8	102.7	102.3	103.2	102.3	102.9	102.9	102.3	103.5
Transportation equipment	97.4	99.6	95.8	96.1	97.9	94.9	96.3	95.6	95.1	96.5
Motor vehicles and equipment	88.3	88.5	84.0	85.1	89.4	82.1	84.6	84.1	84.3	86.4
Instruments and related products	104.9	107.1	104.0	103.2	105.8	104.2	103.9	104.5	104.2	103.9
Miscellaneous manufacturing	78.9	83.6	79.2	80.3	82.4	79.9	81.3	82.5	83.3	83.5
Nondurable goods	93.1	98.8	95.9	95.8	95.5	96.3	97.2	97.6	97.6	98.2
Food and kindred products	91.7	100.9	96.0	94.4	98.2	99.0	100.6	100.1	100.6	100.9
Tobacco manufactures	79.9	83.8	79.8	69.2	82.8	77.5	78.9	78.4	76.9	72.6
Textile mill products	76.0	82.8	81.1	81.5	77.3	79.9	80.7	81.7	81.8	83.1
Apparel and other textile products	84.5	88.1	85.5	86.9	85.5	85.9	86.4	87.6	87.0	87.9
Paper and allied products	100.1	105.5	102.6	101.7	102.0	102.0	102.7	103.7	103.5	103.6
Printing and publishing	125.5	134.1	128.9	129.7	127.0	129.7	130.2	130.8	130.1	131.0
Chemicals and allied products	92.8	94.3	93.2	94.0	93.3	93.7	94.6	93.4	94.1	94.6
Petroleum and coal products	76.9	77.6	79.8	79.5	81.0	79.4	79.6	79.3	82.7	83.0
Rubber and miscellaneous plastics products	111.2	116.8	114.8	114.4	112.1	113.5	114.8	115.2	115.3	115.4
Leather and leather products	58.5	59.6	57.2	58.1	61.3	56.8	57.5	58.9	59.2	61.1
Service-producing	124.1	132.1	127.4	128.5	127.8	129.7	130.7	130.1	130.6	132.2
Transportation and public utilities	105.5	109.4	106.0	107.6	108.0	107.3	108.6	108.2	108.7	110.0
Wholesale trade	117.5	120.1	118.2	118.0	119.8	119.8	119.5	119.2	119.6	120.3
Retail trade	112.0	125.9	115.8	116.2	118.3	119.7	120.8	119.2	119.8	122.7
Finance, insurance, and real estate	133.6	140.5	139.7	140.4	135.4	139.7	141.1	140.7	141.2	142.3
Services	140.8	147.2	144.7	146.9	143.7	146.8	147.9	148.2	148.4	149.7

[1] See footnote 1, table B-2.

p = preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1985	52.4	47.8	53.8	49.2	51.6	47.0	56.2	56.8	50.8	61.9	57.6	59.5
	1986	59.7	53.5	45.1	54.1	49.2	46.2	54.6	54.3	54.9	55.1	62.7	62.4
	1987	p53.2	p59.2										
Over 3-month span	1985	51.1	49.7	46.2	46.2	45.1	51.4	49.7	51.1	55.1	55.9	61.4	60.5
	1986	58.1	54.3	51.1	49.7	48.4	44.9	47.3	54.1	54.9	62.4	65.1	p62.2
	1987	p61.4											
Over 6-month span	1985	49.2	47.8	43.0	45.9	44.3	44.3	48.9	50.8	54.1	57.0	57.0	55.9
	1986	53.8	53.8	47.6	45.9	45.9	48.6	49.7	55.4	61.1	p60.8	p62.4	
	1987												
Over 12-month span	1985	46.2	45.7	46.8	43.8	44.9	47.3	47.6	48.9	47.3	49.5	48.9	48.6
	1986	50.3	51.1	52.2	52.4	52.7	54.6	p54.6	p54.3				
	1987												

[1] Number of employees, seasonally adjusted for 1-, 3-, and 6-month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

p = preliminary.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.

The Consumer Price Index: 1987 Revision

U.S. Department of Labor
Bureau of Labor Statistics
January 1987

Report 736

Effective with the release of data for January 1987, the Bureau of Labor Statistics (BLS) began publication of a revised Consumer Price Index (CPI). Major objectives of this revision were: (1) To update the content and weights of the market basket of goods and services priced for the CPI; (2) to update the statistical sample of urban areas, outlets, and unique items used in calculating the CPI; (3) to improve the statistical methods used for computing a number of CPI components; and (4) to improve operating procedures. This report provides background information and further detail on these changes.

Brief description of the CPI

The CPI measures the average change in prices over time for a fixed market basket of goods and services. CPI's are published for two population groups: (1) A CPI for All Urban Consumers (CPI-U), representing the spending habits of 80 percent of the population of the United States; and (2) a CPI for Urban Wage Earners and Clerical Workers (CPI-W), representing the spending habits of 32 percent of the population. The CPI-U covers, in addition to wage earners and clerical workers, professional, managerial, and technical workers, short-term and self-employed workers, unemployed persons, retirees, and others not in the labor force. The CPI-W covers those consumer units in which more than one-half of the income is earned from clerical or wage occupations, and at least one of the members is employed for 37 weeks or more in such an occupation. Not covered by either index are persons living in rural areas, members of the armed services, and persons in institutions.

The CPI is based on a sample of prices of all goods and services that people buy for day-to-day living. Price changes are measured by repricing essentially the same market basket of goods and services at regular time intervals. The total cost of that market basket during one period is compared with the total aggregate cost in a different period. Prices of most goods and services are obtained through personal visits by the Bureau's trained representatives to approximately 21,000 retail establishments and 60,000 housing units.

The CPI's market basket of goods and services is held constant between revisions in order to separate price changes from changes in quantities purchased. The CPI is a measure of price change and not a measure of the cost of living. For this reason, the CPI is not affected by changes in income taxes, but does reflect changes in sales taxes and other indirect taxes.

In calculating the index, price changes for the various items in each sampled urban area are averaged together according to the weights which represent their importance in the spending patterns of the appropriate population group. Data for the sampled areas are then combined to form a U.S. City Average. However, area indexes are not designed to measure differences in the level of prices or costs of living among cities; they do measure the average change in prices for each area from one period to another.

Uses of the CPI

Since the CPI is a measure of the price change of a constant market basket of goods and services over time, a principal use of the CPI is as an indicator of inflation. As an economic indicator, it is used by the Executive Branch, the Congress, and the Federal Reserve Board to determine and evaluate Government economic policy. A second use of the CPI is to adjust other economic statistics for price change and translate current-dollar amounts into inflation-free values. Statistics that are adjusted—or deflated—by the CPI include retail sales, hourly and weekly earnings, and personal consumption expenditures used to calculate the gross national product (GNP). All are important indicators of economic performance.

Another major use of the CPI is to escalate income payments. More than 3 million workers are covered by collective bargaining agreements which provide for increases in wage rates based on increases in the CPI. In addition to private sector workers whose wages or pensions are adjusted according to changes in the CPI, the index affects the income of about 60 million persons through Federal expenditures for social programs: 38 million recipients of Social Security benefits, over 3 million retired military and Federal civil servants and their survivors, and about 19 million food stamp recipients. Changes in the CPI also affect 24 million children through adjustments to the School Lunch Program. The official "poverty threshold" estimate, which is the basis of eligibility in many health and welfare programs of both the Federal Government and State and local governments, is updated periodically making use of the CPI.

In fiscal year 1986, an increase of 1 percent in the CPI would have meant a $2.8-billion increase in Federal expenditures for these programs. In addition, since 1985 the CPI-U All Items index has been used to adjust the tax brackets of the Federal income tax in order to prevent inflation-induced tax rate increases. It was estimated by the Office of Management and Budget that prior to passage of the Tax Reform Act of 1986, an adjustment for a 1-percent increase in the CPI would reduce potential income tax revenues by $1.8 billion.

In addition, escalator clauses in an increasing number of rental, royalty, alimony, and child support agreements use the CPI to adjust payments to an undetermined number of people.[1]

Interpretation of the CPI

The CPI measures price change for the goods and services consumed, on average, by the specified population group. These items run the gamut from bread and butter to television sets and compact discs, from prenatal and obstetric services to charges for funeral services, from popular paperbacks to college textbooks.

The CPI is expressed as an index number with a specified base period. Currently, for most items in the index, the base period is 1967 (1967 = 100). Thus, an index of 150.0 for a given month means that consumer prices in that month averaged 50 percent higher than in 1967. If the CPI then rises from 150.0 to 180.0 in a later month, the prices in the second month average 80 percent higher than in 1967 and 20 percent higher than in the earlier month when the index was 150.0—i.e., (180.0-150.0/150.0) x 100.

The constant market basket used in the construction of the CPI does not imply that consumers will actually purchase the same goods and services year after year. Consumers, in fact, tend to adjust their shopping habits for a variety of reasons. Since the CPI is predicated on the purchase of a fixed market basket of goods and services, in the same proportions, month after month, it is called a price index rather than a cost-of-living index. In addition, because it is expenditure based rather than income based, the CPI does not include the effect of changes in income-related items such as income taxes or Social Security taxes. Also, it does not reflect noncash items, such as certain benefits received as part of a job, or services supplied by government agencies without payment of a specific fee.

The consumption market basket

The weight of an item in the CPI reflects the importance of that item in the budget of the consumer unit and is derived from expenditures on that item as estimated by the Consumer Expenditure Survey (CES). This survey provides data on average expenditures for every category of consumption by all persons in the relevant population—renters, homeowners, families with children, couples, and individuals.

Consumers change their purchasing patterns as a result of changes in a number of factors, including relative prices, real income, demographic characteristics, and tastes. To ensure that the CPI reflects price change for a market basket of items that is relevant for contemporary consumers, it is necessary to update the market basket periodically.

Price changes over time may differ among items, and these differences can affect consumer demand. This is illustrated by rapidly rising prices for energy items through the 1970's and early 1980's. In the Consumer Price Index for All Urban Consumers (CPI-U), energy products (gasoline, motor oil, electricity, natural gas, fuel oil, bottled gas, and coal) rose 259 percent from December 1972 to December 1983, nearly twice as fast as the average increase for all items. According to data from the Consumer Expenditure Survey, urban consumer units reported an increase of 167 percent for energy expenditures from 1972-73 to 1982-84. This increase was substantially smaller than the change in energy prices and implies a reduction in the consumption of energy items per consumer unit as a result of higher relative prices. This kind of economic adjustment was also seen in related consumption, such as the increased demand for smaller and more fuel-efficient automobiles.

Another factor which can influence consumers' consumption patterns is changing real income. While an increase in income usually will lead to a rise in total consumption, it generally will also lead to changes in the proportions spent on the various items.

Social and demographic changes can also create changes in spending patterns. For example, in 1972, about two-fifths of married women with a husband present were in the labor force. By 1983, this had increased to slightly over one-half. At the same time, the labor force participation rate for married women, with husband present and with a child under 6 years of age, increased from less than a third in 1972 to almost one-half. Demographic changes of this kind affect expenditure patterns. For example, relative expenditures for such items as day care, nursery school, babysitting, and eating meals out have assumed a larger proportion of the family budget.

Other factors, such as technological innovation and product modification, also affect the pattern of consumption over time. For example, in recent years the electronics industry has influenced consumer purchases through the introduction of such items as personal computers, video games, and video recorders. Also, over time, products already on the market are modified and improved.

Finally, a more subtle phenomenon which contributes to changes in the relative importance of items in the market basket is the change in consumers' tastes. There are a variety of ways in which lifestyles and tastes change, such as the increasing number of persons who use the facilities of a physical fitness organization. These shifts in preferences may also change expenditure patterns for complementary items such as sports clothing and equipment.

Not only do the consumption patterns of individual consumer units change over time, but also the geographic distribution of the population may change. Between 1970 and 1980, the total population of the United States grew 11.4 percent, but the population of the South grew 20.0 percent and the West 23.9 percent. The South and West now have 51.4 percent of the urban population; this compares with 47.0 percent for the 1972-73 market basket.

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[1] For information on the procedures to use in escalation arrangements, see *Using the Consumer Price Index for Escalation*, BLS Report 732, October 1986.

Consumer Expenditure Survey

One of the most important elements in the revision of the CPI is the Consumer Expenditure Survey (CES), which is the basis for selecting and weighting a new market basket of goods and services to be priced. For the 1987 CPI revision, expenditures from the 1982-84 period are being used. The previous revision, introduced in 1978, used expenditure data from 1972-73.

The CES is composed of two separate surveys—an interview survey and a diary survey, both conducted by the Bureau of the Census for BLS. The interview survey is used to collect data for expenditures which respondents can remember fairly accurately for periods of approximately 3 months. The diary survey is designed to obtain expenditure information for small, frequently purchased items which consumers tend to forget. Approximately 5,000 consumer units are contacted each year for each type of survey.

In the interview survey, the respondent is visited in each of five consecutive quarters. The purpose of the first interview is to collect information on the characteristics of the consumer unit and to establish inventories of items held by the respondent—properties, vehicles, major durable goods, and insurance policies. In subsequent interviews, expenditure data are collected for a full year on all varieties of consumer expenses.

The diary survey consists of two consecutive week-long records of purchases. The goal is to record every purchase made during the 2-week period by any member of the consumer unit including spouse or children. The diary is used primarily to capture information on grocery store purchases, gasoline, meals, snacks and beverages, many apparel items, and other small, routine purchases. Spending out of town is not included in the diary survey. In those cases where the same expenditures appear in both surveys, the data are evaluated to determine which source should be used.

The weeks in which diaries are kept are spread throughout the year, with the sample size being doubled during the last 6 weeks of the year to obtain better estimates of seasonal items purchased during the Christmas season. The diary survey, with a 2-week reference period, provides more detail than the interview survey. The diary survey obtains data for 10,400 survey weeks from 5,200 consumer units, while the interview survey covers 20,000 survey quarters from 5,000 consumer units.

Each expenditure reported in the two surveys is coded to one of the 364 entry level items (ELI's) which constitute the most detailed level of the CPI classification structure. These ELI's are grouped to form 184 priced item strata. The stratum is the lowest level for which expenditure weights are calculated, and thus, the level at which the market basket expenditure weights are determined. Allocation of the samples of prices and of outlets is done at the stratum level.

Strata are combined to form 69 expenditure classes (EC's)—categories of commodities or services with similar characteristics. Expenditure classes are joined to form the seven major groups of expenditures: (1) Food and beverages, (2) housing, (3) apparel and upkeep, (4) transportation, (5) medical care, (6) entertainment, and (7) other goods and services.

Relative importance and the changing market basket

The expenditure on each category of consumption in the base period as a percent of all consumption expenditures is called the relative importance of the particular category for the base period. The relative importance of an item in the CPI for a given month is the share of total expenditures that would occur for that item if quantities consumed remained constant and only the prices to consumers changed. Although the quantity weights remain fixed in the CPI, the relative importance changes over time, reflecting the effect of relative price changes.

Table 1 shows the relative importance of major groups in the CPI for each revision since 1939, along with those based on 1982-84 expenditures that have been updated for price change and used in the January 1987 revision. Table 2 provides the relative importance of each item in the CPI-U from the 1982-84 base period Consumer Expenditure Survey and the relative importance from the CPI-U for June 1983, which are based on 1972-73 expenditure weights and updated for relative price changes. Some of the more significant changes in relative importance that result from this revision are discussed below.

Items whose prices rise faster than the average become relatively more important. Between 1977 and 1982, motor fuel prices rose faster than most other prices. As a result, in the CPI for All Urban Consumers, the relative importance of motor fuel, which was 4.2 percent in December 1977, increased to nearly 6.2 percent in December 1982, even though the same quantity and quality of motor fuel figured in the calculation.

Compared with 1972-73 expenditure data, the 1982-84 data show a smaller relative importance for food and beverages. Within that major group, however, grocery store foods dropped substantially in relative importance, while food away from home maintained its share of total expenditures. This increased importance of restaurant meals may, in part, be the result of the increase in two-earner households and smaller family size. The increase in the relative importance for alcoholic beverages reflects improved reporting techniques.

The relative importance of housing increased to 42.6 percent in 1982-84 expenditures. The largest change was in homeowner costs and results from a number of factors. First, the percentage of the population living in their own homes rose between 1972-73 and 1982-84. Second, the quality of these homes increased. Houses became larger and contained more rooms and bathrooms. In addition, more houses were built with central air conditioning. In the revised CPI, owner use of vacation property is included in the weight for lodging while out of town.

The revised transportation component has a smaller relative importance than in the 1972-73-based CPI. The largest reduction is in the importance of used cars, which results, at least in part, from improvements in definitions and in the derivation of the expenditure weight for used cars.

Prior to the 1987 revision, only some sales of used cars by consumers were subtracted from used car purchases, while most were subtracted from new cars. In the expenditure data from 1982-84, all sales of used cars by consumers (including the market value of new car trade-ins) have been subtracted from used car purchases to avoid double-counting of the same car. The relative importance of used cars in the index, thus, is determined by consumer purchases of used cars from business, government, and foreign countries, plus any markup by used car dealers on sales of cars purchased from consumers.

The new sample of used cars priced for the CPI also is consistent with this change. It represents purchases by consumers from the nonconsumer sectors. The average age of cars in the sample is somewhat lower than before since most businesses dispose of their cars on a 3-year cycle.

For many years, BLS has made "quality adjustments" for new car prices. That is to say, price changes resulting from physical changes to the automobile (e.g. radial tires becoming standard or improved crash resistance of bumpers) have been removed for index calculation. Beginning with 1987, similar adjustments are being made for used cars.

One part of the transportation component that has increased in importance is new cars. This is, in part, because the value of all used car trade-ins is now subtracted from the weight for used cars and not new cars. Another reason is the increased quality of cars that are purchased today compared with a decade ago. New cars are being purchased with more features and quality improvements, resulting in an increase in the relative importance for new cars in the revised CPI.

The decline in the weight of transportation in the CPI is largely the result of the decrease in the relative importance for motor fuel. This change is primarily due to conservation efforts generated by the sharp increase in fuel prices in the period between expenditure surveys and to the increased fuel effeciency of vehicles purchased by consumers.

The medical care component also has declined in relative importance, in part because of the growth in employer-provided health insurance over the period 1972-73 to 1982-84. The CPI measures price changes for out-of-pocket medical expenses. The index does not include the cost of medical care paid for by employer-financed health insurance. Health insurance premiums paid for by the consumer (including contributions to employer plans) are in the CPI, but they are priced in an indirect manner and are not published as a separate index. The revised index will continue the treatment of health insurance that has been used for some years. The premium provides the insurance carrier with funds for two purposes: (1) To pay benefits for health care and (2) to administer the policy and provide for any profit. The second element is called retained earnings. In the pre-1987 CPI, the price change for the benefits portion of the premium came from a composite of the prices for covered medical expenses. The price change for the retained earnings portion is the combination of the price change for the benefits and the relative of change in the retained earnings rate. Retained earnings data are obtained from secondary sources.

For the 1987 revision, the basic method for pricing health insurance remains unchanged, but there are some changes in presentation. Instead of keeping the benefits portion of premiums under the health insurance classification, the expenditure weight for each class of benefits has been added to the direct out-of-pocket payments. Thus, the relative importance of hospital rooms, for example, represents not only consumer payments to hospitals for rooms, but also payments for hospital rooms by health insurance carriers from policies paid for by consumers. As a result, more than a quarter of the weight for hospital rooms comes from insurance benefits. No change was made in the pricing procedure. Before 1987, hospital room prices were the basis for calculating hospital room charges paid by insurance, but they were not published in the health insurance portion of the index. Now the full consumer-financed hospital room expenditure—whether directly out of pocket or from consumer-paid insurance—is shown as part of the relative importance of hospital rooms, with the insurance-paid portion separately identified.

The unpublished portion of the index for health insurance now represents only the retained earnings portion of the premiums. Although the method of pricing continues as before, the secondary data on retained earnings rates come from more timely and more accurate sources.

All of the changes in coverage and definition for item indexes are summarized in table 3. A number of individual indexes with small relative importance, especially in the food group, have been combined in the 1987 revision. Combining them permits construction of a more accurate overall index and makes room for indexes for new or expanding products. Some of the indexes which disappeared in the combining process are still provided as special calculations. These special indexes, however, have much smaller samples and are subject to higher sampling variablity than during the 1978-86 period (see table 3).

New samples

The CPI is developed from a series of interlocking samples. Every month, prices for about 100,000 items and data on about 8,300 housing units are collected.[2] The specific cases to be priced have been selected through probability sampling to insure the most precise CPI possible with these sample sizes. The sampling process has multiple stages. The first is a selection of urban areas within which pricing will occur. For the housing survey, sets of blocks are selected and then individual housing units within those blocks. For other item strata, ELI's are chosen to represent each item stratum in each urban area based on the relative importance

[2] Data from 40,000 rental units are collected twice a year and from 20,000 owner units once a year.

of each ELI within the stratum. The outlets (stores, doctors' offices, public utilities, etc.) are selected where residents of the urban area shop, and finally the unique items are selected for pricing within each outlet. The following discussion provides additional information on each of these sampling phases.

Urban area samples. The new urban area sample is based on the 1980 Census of Population and uses the new Consolidated Metropolitan Statistical Area (CMSA) definitions. Of the 27 urban areas for which individual CPI's are published, 5 (Anchorage, Buffalo-Niagara Falls, Honolulu, Milwaukee, and San Diego) were unchanged in their geographic coverage. Most of the other areas have larger geographic coverage. Only Dallas-Fort Worth became smaller, since Wise County was removed from its official definition.

Several sampling areas have been significantly expanded. For example, the New York area now includes Danbury and other parts of Connecticut; Wilmington and Trenton have been added to the Philadelphia area; Boston now includes some parts of New Hampshire; the Miami area now includes Fort Lauderdale; the Chicago area has three additional counties including Kenosha, Wisconsin; Houston has added Galveston; Los Angeles now includes Riverside-San Bernardino; and San Francisco now includes San Jose. The complete list of counties for each local area published can be found in table 4.

CMSA's and the Metropolitan Statistical Areas which are not a part of a CMSA were defined as individual primary sampling units. All nonmetropolitan counties were grouped into primary sampling units to allow all urban places with a population greater than 2,500 outside metropolitan areas an opportunity to be selected. The overall primary sampling unit design consisted of 278 metropolitan areas and 810 nonmetropolitan urban areas, which cover all the urban population. Primary sampling units with at least 1.2 million persons were designated "certainty areas." Prices are collected in each of these areas, and each represents itself in the weighting of the estimates to the total CPI population. The noncertainty selections have a population weight that represents the population of all cities (including their own population) in their stratum—a collection of areas of similar size in the same geographic region. The 29 largest primary sampling units and 2 unique areas (Anchorage and Honolulu) were designated certainty areas.

Prior to the 1987 revision, these largest certainty areas had been divided into two size classifications: A-1 (over 4 million), and A-2 (1.25 million to 4 million). These two groups have since been combined to form one classification, A-sized, which is made up of areas of 1.2 million inhabitants or more.

The remaining primary sampling units in all major regions were assigned to three city-size classes—medium-sized metropolitan areas, small-sized metropolitan areas, and nonmetropolitan urban areas. The sampling process selected 91 areas—39 new areas and 52 retained from the old sample. This was an increase from 85 areas in the pre-1987 index. A comparison of primary sampling units in the old and new samples by population size and region is shown in table 4.

Table 4 also shows the population weights in terms of consumer units for both the CPI-U and CPI-W in each of the published areas as a percentage of their respective national 1980 totals. If these weights are compared with the weights shown for 1970, one can ascertain the degree of relative population change for each area since 1970. For example, the weight for the CPI-U population in the Northeast region declined by about 2.5 points between 1970 and 1980. This decline reflects the faster rate of population growth in the South and West in recent years. Even though the definition of the New York area has been expanded since 1970, table 4 shows that the relative population weight of the area has declined.

The decision to use sample allocations to produce the most accurate national CPI possible within the existing budget constraints affects the frequency of publishing CPI's for 13 local areas. Beginning with the January 1987 CPI, San Francisco is being published on a monthly basis along with the other four largest local areas—New York, Los Angeles, Chicago, and Philadelphia—while Detroit is being published bimonthly in even-numbered months. Bimonthly indexes continue to be published for each of the next 10 largest areas, with the Cleveland index changing from even-numbered months to odd-numbered months. Bimonthly indexes which had been published for the 12 smaller local areas are no longer available; they have been replaced with semiannual average indexes. In addition, the index for Northeast Pennsylvania (Scranton) has been discontinued. These semiannual average indexes, which are the averages of the 6-month periods from January through June and July through December, are published with the release of the CPI for July and January, respectively, i.e., in the months of August and February.

The method of calculating the semiannual average index derives from the one used for calculating annual average indexes which BLS publishes at the end of each year. Because monthly and bimonthly indexes are not published in areas with semiannual average indexes, the first step is to calculate intermediate monthly and bimonthly indexes for use in the annual average computation. For those items priced monthly, such as food at home, an intermediate monthly calculation is prepared for each of the 6 months. These six calculated numbers are summed and then divided by six to obtain the semiannual index. A similar but more complex technique is used for items priced bimonthly in each area. An intermediate index is compiled for each of the 3 months in which items are actually priced during the 6-month period. The monthly index for each of the other 3 months is interpolated by calculating a geometric mean of the months adjacent to the one being estimated. For example, in an area priced in even-numbered months, a January interpolation is estimated by taking the geometric mean between the index calculations for December and February. Interpolations are made in a similar manner for March and May. The three intermediate numbers for February, April, and June, calculated with collected prices, are summed with the three interpolations and divided by six to obtain the semiannual average index for the first 6 months of the calendar year.

Semiannual indexes for areas in which items are priced only in odd-numbered months are calculated by the same method except that the data for February, April, and June are interpolated by using the geometric mean between the calculations of their adjacent months. For example, the June interpolation would be estimated from the calculations made for May and July.

Outlet and item samples. Outlets in which items for the CPI are to be priced are derived from data collected in the Point-of-Purchase Survey (POPS). Consumer units are interviewed in each of the areas in which prices are collected. Respondents are asked for information on purchases of items within specific categories during a prescribed reference period. If a purchase has been made, the name and address of the outlet is recorded along with the cost of each transaction. BLS then selects a probability sample from these outlets for each expenditure category, using the expenditures at each outlet as a measure of size. This ensures an unbiased outlet sample with representation of all types of establishments; the system also permits estimation of variances and sampling error.

The outlet sample has, since 1978, been rotated on a 5-year cycle, and this rotation process will continue. A POP survey is conducted each year in about one-fifth of the urban areas included in the CPI; the results are then used to select a new, more up-to-date sample of outlets and unique items. This framework also was used to update the area sample for the 1987 revision.

In previous CPI revisions, all new samples of urban areas, items, and outlets were introduced at one time. The 1987 revision uses a concept of rolling-in the new area, item, and outlet samples. That is, the composition of the area and item samples will be gradually updated over a period of 2 years, rather than substituting the full set of new area and outlet samples at the same time. The system, which is more efficient and easier to manage than the approaches used in the past, is possible because a continuing Point-of-Purchase Survey for a systematic updating of outlet samples is now in place, and broader definitions of the characteristics of items which define strata were developed. The first stage of rolling-in was the initiation of pricing in 20 new areas to reflect changes in population distribution.

The new process allows more time to train field representatives and reduce the problems associated with a rapid expansion and subsequent reduction in staff. More important, use of the updating procedures to introduce new outlet samples on a systematic basis reduces the need for dual operations during the 6-month period when both the old and the revised CPI will be published.

Beginning in 1987, when the outlet samples were updated for one-fifth of the urban areas and new detailed items were selected for pricing, the sample of entry level items within each stratum also was updated, using the 2 most recent years of Consumer Expenditure Survey data. Although weights at the item strata level will continue to be held constant between major revisions of the CPI, relative shifts of consumption among items within a stratum or new products appearing within the stratum will be represented in the index. In other words, the entry level item sample will reflect the changes consumers are making in the variety of products purchased among those that make up an item stratum of the index. For example, one of the item strata in the CPI includes expenditures for both books and magazines, with separate ELI's for each of them. If consumption should begin to shift away from magazines to books, then the composition of the CPI sample would also shift over the 5-year rotation cycle of the outlet sample. The base-period relationship of books and magazines combined to the overall market basket will, however, remain the same. The reselection of the item samples within each fixed-weight category for one-fifth of the area sample does not alter the fixed-weight nature of the CPI because the population-expenditure weights will remain fixed at the item strata level until the next revision. This ELI reselection will not affect entry level items which have a very large relative importance or are the only ones in the particular strata and, therefore, are certain to be priced in all urban areas. The samples of unique items in single-ELI strata have, since 1978, been fully updated by the sample rotation process. In multiple-ELI strata, the sample rotation process has been confined to updating within ELI's. The new procedure places both types of strata on the same basis.

Enhancement to the shelter component

The adoption of owners' equivalent rent to measure changes in the cost of the shelter component of owner-occupied homes put the housing component of the CPI on a flow-of-services conceptual footing, and isolated the consumption element of owner housing from its investment element.[3] The 1987 CPI revision continues the definitional and coverage features associated with that change while incorporating some refinements. The new index for materials, supplies, and equipment for home repairs, which combines three more detailed old indexes, includes for pricing only those types of items that would be purchased by tenants and those that are associated with the cost of shelter. The index excludes items purchased for capital improvements.

The new shelter sample has been designed to represent optimally both owners and renters. A multistage sampling procedure was used that stratifies the residential areas of each primary sampling unit by tenure (percent owner-occupied) and rent level. Smaller areas were then defined and sampled within each selected area. The housing units of each selected small area were screened for tenure and sampled at differential rates according to tenure. In heavily owner-occupied areas, for example, the renters were selected frequently in order to find those rental units which are most like owner units, because it is from these units that the best estimates can be made for changes in the implicit rent of owner-occupied dwellings. The new shelter sample has been drawn based on the 1980 Census, updated for new construction. Because of its dual purpose—support of both owners' equivalent rent and rent indexes—the new sample includes almost twice as many renters as the old one.

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[3] The concept of owners' equivalent rent was introduced in the CPI-U in 1983 and in the CPI-W in 1985.

The calculation of the revised owners' equivalent rent index has also been improved. Before 1987, the owners' equivalent rent index was obtained by simply reweighting rented units in the rent sample to represent all the owners from the same set of blocks. Beginning in 1987, the rate of implicit rent charged for each owner unit in a sample of homeowners is estimated by using a set of rents for housing from the same geographic area and with similar characteristics.

The rents used for estimating the owners' equivalent rent index are adjusted to remove the cost of utilities paid by landlords. The residential rent index measures contract rent—i.e., the rent actually paid. If the contract rent includes some (or all) utilities, then both the expenditure weights and the rent charges for the CPI properly include these utilities in the proportion that they are included in contract rents in the population. Owners' equivalent rent expenditure weights however, exclude all utilities. Utility charges paid by owners and paid directly by renters are represented by the appropriate utility index. By removing utility costs from contract rent before calculating owners' equivalent rent, the effects of changes in utility rates will not appear in the owners' equivalent rent index.

IN CONCLUSION, this revision, as in the past, permits BLS to introduce the latest advances in sampling, data collection, processing, and statistical estimation procedures in addition to allowing for the updating of the expenditure weights of the market basket and the updating of the area sample. Once a revision has been completed, however, the BLS staff must continue to evaluate procedures, to monitor changes in the economy which might affect compilation, and to investigate alternative methods for all phases of the CPI program. It is only through this constant vigilance that the BLS can continue to maintain the statistical integrity of the Consumer Price Index for its numerous different users.

Inquiries concerning the CPI may be directed to the regional offices of the Bureau of Labor Statistics, listed at the back of this report, or to the Office of Prices and Living Conditions, Bureau of Labor Statistics, Washington, DC 20212.

Table 1. Percent distribution of the Consumer Price Index market basket by major expenditure group, benchmark year

Major group	Wage earners and clerical workers (CPI-W)						All urban consumers (CPI-U)		
	1939[1]	1952[2]	1963[3]	1977[4]	1984[5]	1982–84[6]	1977[4]	1982[5]	1982–84[6]
Food and beverages	35.4	32.2	25.2	20.5	21.3	19.6	18.8	20.1	17.8
Housing	33.7	33.5	34.9	40.7	34.9	40.0	43.9	37.7	42.6
Apparel and upkeep	11.0	9.4	10.6	5.8	5.0	6.5	5.8	5.2	6.5
Transportation	8.1	11.3	14.0	20.2	24.1	20.9	18.0	21.8	18.7
Medical care	4.1	4.8	5.7	4.5	5.6	3.9	5.0	6.0	4.8
Entertainment	2.8	4.0	3.9	3.9	3.9	4.1	4.1	4.2	4.4
Other goods and services	4.9	4.8	5.7	4.4	5.2	5.0	4.4	5.0	5.1

[1] Relative importance for the expenditure survey period 1934–36 updated for price change.

[2] Relative importance for the expenditure survey period 1950 updated for price change.

[3] Relative importance for the expenditure survey period 1960–61 updated for price change.

[4] Relative importance for the expenditure survey period 1972–73 updated for price change.

[5] Relative importance for the expenditure survey period 1972–73 with the rental equivalence approach to homeowners' costs updated for price change.

[6] Relative importance for the expenditure survey period 1982–84. For revised indexes introduced January 1987, the expenditure weights were updated for price change between the survey period and December 1986, and the relative importance may differ from the data shown.

NOTE: Because of rounding, sums of individual columns may not equal 100.

Table 2. Relative importance by item, for the Consumer Price Index for All Urban Consumers, U.S. City Average, unrevised and revised, representing the 1982-84 Consumer Expenditure Survey Period

Item	June 83 *(unrevised)*	1982-84 *(revised)*
All items	100.000	100.000
Food and beverages	20.076	17.840
Food	18.961	16.283
Food at home	12.853	10.138
Cereal and bakery products	1.703	1.351
Cereal and cereal products	.438	.429
Flour and prepared flour mixes	.107	.082
Cereal	.208	.237
Rice, pasta, and cornmeal	.123	.110
Bakery products	1.265	.921
White bread	.358	.229
Fresh other breads, biscuits, rolls, and muffins	.252	.210
Cookies, fresh cakes, and cupcakes	.315	.226
Other bakery products	.340	.256
Meats, poultry, fish, and eggs	4.134	3.177
Meats, poultry, and fish	3.946	2.992
Meats	3.147	2.219
Beef and veal	1.713	1.140
Ground beef other than canned	.445	.438
Chuck roast	.201	.094
Round roast	.172	.062
Round steak	.107	.098
Sirloin steak	.122	.090
Other beef and veal	.667	.358
Pork	.910	.638
Bacon	.170	.114
Chops	.192	.150
Ham	.226	.143
Other pork, including sausage	.322	.231
Other meats	.524	.441
Unpriced items[1]	.002	.000
Poultry	.383	.439
Fresh whole chicken	.151	.144
Fresh and frozen chicken parts	.127	.205
Other poultry	.105	.089
Fish and seafood	.417	.334
Canned fish and seafood	.152	.093
Fresh and frozen fish and seafood	.265	.241
Eggs	.188	.185
Dairy products	1.680	1.350
Fresh milk and cream	.952	.680
Fresh whole milk	.692	.396
Other fresh milk and cream	.260	.284
Processed dairy products	.728	.670
Cheese	.361	.374
Ice cream and related products	.183	.170
Other dairy products including butter	.184	.126
Fruits and vegetables	1.959	1.677
Fresh fruits and vegetables	1.069	1.009
Fresh fruits	.516	.512
Apples	.099	.096
Bananas	.072	.088
Oranges, including tangerines	.101	.061
Other fresh fruits	.243	.267
Fresh vegetables	.553	.497
Potatoes	.122	.088
Lettuce	.117	.068
Tomatoes	.065	.076
Other fresh vegetables	.248	.265
Processed fruits and vegetables	.891	.668
Fruits and vegetables—Continued		
Processed fruits	.451	.381
Fruit juices and frozen fruit	.122	.296
Canned and dried fruit	.157	.085
Processed vegetables	.440	.288
Frozen vegetables	.123	.097
Other processed vegetables	.317	.191
Other foods at home	3.376	2.584
Sugar and sweets	.488	.366
Sugar and artificial sweeteners	.141	.105
Sweets, including candy	.348	.261
Fats and oils	.341	.270
Nonalcoholic beverages	1.403	.897
Carbonated drinks	.869	.490
Coffee	.274	.251
Other noncarbonated drinks	.261	.156
Other prepared foods	1.144	1.050
Canned and packaged soup	.108	.083
Frozen prepared foods	0.179	0.186
Snacks	.216	.217
Seasonings, condiments, sauces, and spices	.306	.275
Miscellaneous prepared foods, including baby foods	.335	.290
Food away from home	6.107	6.145
Lunch	1.958	2.162
Dinner	2.190	2.639
Other meals and snacks	1.181	1.025
Unpriced board and catered affairs[1]	.778	.319
Alcoholic beverages	1.116	1.558
Alcoholic beverages at home	.851	.911
Beer and ale	.426	.468
Wine	.136	.215
Distilled spirits	.289	.228
Alcoholic beverages away from home	.120	.647
Unpriced items[1]	.055	.000
Housing	37.789	42.637
Shelter	21.407	26.283
Renters' costs	6.964	7.485
Rent, residential	6.042	5.679
Other renters' costs	.921	1.806
Lodging while out of town	.600	1.601
Lodging while at school	.239	.170
Tenants' insurance	.083	.035
Homeowners' costs	13.916	18.569
Owners' equivalent rent	13.524	18.175
Household insurance	.393	.394
Maintenance and repairs	.527	.230
Maintenance and repair services	.286	.134
Maintenance and repair commodities	.240	.096
Materials, supplies, and equipment for home repairs	.149	.041
Other maintenance and commodities	N.A.	.054
Fuel and other utilities	8.432	8.514
Fuels	6.241	5.187
Fuels and other household fuel commodities	1.371	.571
Fuel oil	1.165	.425
Other household fuel commodities	.196	.146
Unpriced items[1]	.009	.000

See footnotes at end of table

Table 2. Relative importance by item, for the Consumer Price Index for All Urban Consumers, U.S. City Average, unrevised and revised, representing the 1982-84 Consumer Expenditure Survey Period—Continued

Item	June 83 *(unrevised)*	1982-84 *(revised)*
Housing—Continued		
Gas (piped) and electricity	4 870	4 617
Electricity	2 680	2 945
Utility (piped) gas	2 190	1 672
Other utilities and public services	2 192	3 331
Telephone services	1 506	2 181
Local charges	843	1 102
Interstate toll calls	364	685
Intrastate toll calls	298	394
Unpriced items[1]	008	000
Water and sewer maintenance	501	602
Cable television	059	409
Refuse collection	118	139
Household furnishings and operation	7 950	7 835
Housefurnishings	4 064	4 974
Textile housefurnishings	576	436
Unpriced items[1]	002	000
Furniture and bedding	1 302	1 352
Bedroom furniture	421	428
Sofas	228	260
Living room chairs and tables	0.257	0.220
Other furniture	396	444
Appliances, including electronic equipment	1 183	1 647
Television and sound equipment	645	965
Television	284	357
Other video equipment	N A	250
Sound equipment	361	358
Major household appliances	538	449
Refrigerators and home freezers	109	129
Laundry equipment	074	133
Stoves, ovens, dishwashers, and air conditioners	N A	187
Information processing equipment	N A	233
Other housefurnishings	1 004	1 540
Floor and window coverings, infants' laundry, cleaning, and outdoor equipment	202	197
Clocks, lamps, and decor items	164	297
Tableware, serving pieces, and nonelectric kitchenware	327	260
Lawn equipment, power tools, and other hardware	201	262
Sewing, floor cleaning, small kitchen, and portable heating appliances	N A	222
Indoor plants and fresh cut flowers[2]	N A	193
Unpriced items[1]	109	109
Housekeeping supplies	1 676	1 253
Laundry and cleaning products, including soap	636	433
Household paper products and stationery supplies	498	407
Other household, lawn and garden supplies	543	414
Housekeeping services	2 209	1 608
Postage	204	261
Babysitting[1]	394	302
Domestic services[1]	430	300
Appliance and furniture repair	362	184
Care of invalids, elderly, and convalescents in the home[2]	N A	054
Gardening and other household services	755	383
Unpriced items[1]	065	124
Apparel and upkeep	5 158	6 524
Apparel commodities	4 368	5 981
Apparel commodities less footwear	3 700	5 062
Men's and boys' apparel	1 419	1 614
Men's apparel	1 126	1 300
Suits, sportcoats, coats, and jackets	397	380
Furnishings and special clothing	255	314
Shirts	201	315
Dungarees, jeans, and trousers	257	273
Unpriced men's uniforms and other clothing[1]	015	017
Boys' apparel	293	314
Boys' apparel[1]	280	311
Unpriced boys' uniforms and other clothing[1]	014	003
Women's and girls' apparel	1 561	2 642
Women's apparel	1 291	2 269
Coats and jackets	143	231
Dresses	218	380
Separates and sportswear	278	1 086
Underwear, nightwear, hosiery, and accessories	N A	392
Suits	107	146
Unpriced items[1]	094	034
Girls' apparel	270	373
Girls' apparel[1]	266	365
Unpriced items[1]	004	009
Infants' and toddlers' apparel	119	231
Infants' and toddlers' apparel[1]	091	211
Unpriced items[1]	028	022
Other apparel commodities	601	573
Sewing materials, notions, and luggage	N A	106
Watches	N A	102
Jewelry	N A	365
Footwear	667	918
Men's footwear	223	278
Boys' and girls' footwear	177	187
Women's footwear	268	453
Apparel services	790	544
Laundry and dry cleaning other than coin operated	525	283
Other apparel services	265	261
Transportation	21 631	18 696
Private transportation	20 096	17 303
New vehicles	3 891	5 497
New cars	3 464	4 439
New trucks and motorcycles	427	1 058
New trucks	N A	976
New motorcycles	N A	082
Used cars	4 106	1 271
Used cars[1]	3 729	1 158
Unpriced items[1]	377	113
Motor fuel	6 140	4 800
Automobile maintenance and repair	1 708	1 538
Body work	247	158
Automobile drive train, brake and miscellaneous mechanical repairs	376	434
Maintenance and servicing	627	530
Power plant repair	458	394
Unpriced items[1]	N A	022
Other private transportation	4 251	4 197
Other private transportation commodities	717	893
Motor oil, coolant, and other products	102	074

See footnotes at end of table

Table 2. Relative importance by item, for the Consumer Price Index for All Urban Consumers, U.S. City Average, unrevised and revised, representing the 1982-84 Consumer Expenditure Survey Period—Continued

Item	June 83 *(unrevised)*	1982-84 *(revised)*
Transportation—Continued		
Automobile parts and equipment	615	819
Tires	438	428
Other parts and equipment	177	391
Other private transportation services	3 534	3 304
Automobile insurance	1 972	1 724
Automobile finance charges	839	912
Automobile finance charges[1]	785	749
Unpriced items[1]	055	163
Automobile fees	722	668
Automobile registration, licensing, and inspection fees	387	315
Other automobile related fees	N A	329
Unpriced items[1]	046	024
Public transportation	1 535	1 393
Airline fares	758	885
Other intercity transportation	074	149
Intracity public transportation	666	349
Unpriced items[1]	037	011
Medical care	6 071	4 796
Medical care commodities	1 000	946
Prescription drugs	477	583
Nonprescription drugs and medical supplies	N A	363
Internal and respiratory over-the-counter drugs	308	232
Nonprescription medical equipment and supplies	112	131
Medical care services	5 071	3 850
Professional medical services	2 319	2 546
Physicians services	1 173	1 313
Dental services	847	767
Eye care	N A	320
Services by other medical professionals	N A	147
Unpriced items[1]	041	000
Hospital and related services	N A	1 178
Hospital room	227	467
Other inpatient hospital services	N A	429
Outpatient services	N A	279
Unpriced items[1]	002	003
Health insurance[3]	2 263	125
Unpriced items[1]	252	000
Entertainment	4 217	4 380
Entertainment commodities	2 483	2 200
Reading materials	718	668
Newspapers	369	323
Magazines, periodicals, and books	348	346
Sporting goods and equipment	665	530
Sport vehicles, including bicycles	496	239
Other sporting goods	N A	291
Unpriced items[1]	015	000
Entertainment—Continued		
Toys, hobbies, and other entertainment	1 100	1 001
Toys, hobbies, and music equipment	542	481
Photographic supplies and equipment	208	136
Pet supplies and expense	320	372
Unpriced items[1]	030	012
Entertainment services	1 734	2 180
Club membership and fees[1]	547	669
Club membership	N A	554
Fees for participant sports	N A	115
Admissions	296	601
Fees for lessons or instructions	N A	211
Other entertainment services	N A	679
Unpriced items[1]	692	020
Other goods and services	5 059	5 128
Tobacco and other smoking products	1 428	1 120
Personal care	1 865	1 236
Toilet goods and personal care appliances	864	672
Cosmetics, bath and nail preparations, manicure and eye makeup implements	265	283
Other toilet goods and small personal care appliances including hair and dental products	599	389
Personal care services	1 001	564
Beauty parlor services for females	681	450
Haircuts and other barber shop services for males	319	113
Unpriced items[1]	001	000
Personal and educational expenses	1 766	2 772
School books and supplies	224	182
College textbooks[2]	128	126
High school textbooks and supplies[2]	030	046
Unpriced items[1]	023	010
Personal and educational services	1 542	2 590
Tuition and other school fees	1 220	1 583
College tuition	802	890
Elementary and high school tuition	212	276
Child daycare and nursery school[1]	N A	255
Technical and other tuition[1]	N A	097
Unpriced items[1]	206	064
Personal expenses	322	1 007
Legal service fees	N A	170
Funeral expenses	N A	491
Personal financial services	N A	264
Unpriced items[1]	066	082

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[1] Item not published by itself but only as part of another index

[2] Not published initially under 1987 revision. Publication to begin when available

[3] Effective with the revision in January 1987, health insurance is defined as the portion of premium payments which is retained by the insurer in the form of profits and operating expenses. The portion of the premium which is either paid directly by the insurer to health care providers or as reimbursement to policyholders is no longer defined as a health insurance expenditure but rather as a direct medical care expenditure

N A Not available

Table 3. Title and definition changes in the Consumer Price Index, beginning with January 1987 data

New series title	Definition change
Food and beverages	
Fresh other breads, biscuits, rolls, and muffins[1]	Combines "Other breads" and "Fresh biscuits, rolls, and muffins."
Cookies, fresh cakes, and cupcakes[1]	Combines "Fresh cakes and cupcakes" and "Cookies."
Other bakery products[1]	Combines "Fresh sweetrolls, coffeecake, and donuts," "Frozen and refrigerated bakery products and fresh pies, tarts, and turnovers," and "Crackers and bread and cracker products."
Ham[1]	Combines "Ham other than canned" and "Canned ham."
Other pork, including sausage[1]	Combines "Sausage" and "Other pork."
Other dairy products, including butter[1]	Combines "Butter" and "Other dairy products."
Oranges, including tangerines (Old title—Oranges)	Adds tangerines.
Other fresh fruits (Old title—Same)	Excludes tangerines.
Fruit juices and frozen fruit[1]	Combines "Frozen fruit and fruit juices" and "Fruit juices other than frozen."
Other processed vegetables[1]	Combines "Cut corn and canned beans except lima" and "Other canned and dried vegetables."
Sweets, including candy[1]	Combines "Candy and chewing gum" and "Other sweets."
Carbonated drinks[1]	Combines "Cola drinks, excluding diet cola" and "Carbonated drinks, including diet cola."
Coffee[2]	Combines "Roasted coffee" and "Freeze dried and instant coffee."
Seasonings, condiments, sauces, and spices[1]	Combines "Seasonings, olives, pickles, relish" and "Other condiments."
Miscellaneous prepared foods, including baby food[1]	Combines "Miscellaneous prepared foods" and "Other canned and packaged prepared foods."
Distilled spirits (at home)[1]	Combines "Whiskey (at home)" and "Other alcoholic beverages (at home)."
Housing	
Lodging while out of town (Old title—Same)	Adds the rental equivalence value of owner-used vacation property.
Materials, supplies, and equipment for home repairs	Combines "Paint and wallpaper, supplies, tools, and equipment," "Lumber, awnings, glass, and masonry," and "Plumbing, electrical, heating, and cooling supplies." Excludes capital improvements and major repair items typically provided by landlords.
Other maintenance and repair commodities (Old title—Miscellaneous supplies and equipment)	Adds hardsurface floor covering and landscaping items not previously priced.
Other household fuel commodities (Old title—Same)	Adds wood, charcoal, and peat not previously priced.
Other video equipment	Consists of video cameras, recorders, players, cassettes, disks, and related equipment.
Major household appliances	Consists of index series titles: "Refrigerator and home freezer;" "Laundry equipment;" and "Stoves, ovens, dishwashers, and air conditioners."
Stoves, ovens, dishwashers, and air conditioners	Combines parts of "Stoves, dishwashers, vacuums, and sewing machines" and "Office machines, small electric appliances, and air conditioners."
Information processing equipment	Consists of home computers, telephones, and other electronic and office equipment for nonbusiness use.
Other housefurnishings	Consists of index series titles: (1) "Floor and window coverings, infants', laundry, cleaning, and outdoor equipment;" (2) "Clocks, lamps, and decor items," (3) "Tableware, serving pieces, and nonelectric kitchenware;" (4) "Lawn equipment, power tools, and other hardware;" and (5) "Sewing, floor cleaning, and small kitchen and portable heating appliances."
Sewing, floor cleaning, and small kitchen and portable heating appliances	Combines parts of "Stoves, dishwashers, vacuums, and sewing machines" and "Office machines, small electric appliances and air conditioners."
Lawn equipment, power tools, and other hardware (Old title—Same)	Adds hand tools.
Laundry and cleaning products including soap[1]	Combines "Soaps and detergents" and "Other laundry and cleaning products."
Household paper products and stationery supplies[1]	Combines "Cleansing and toilet tissue, paper towels, and napkins" and "Stationery, stationery supplies, and giftwrap."
Other household, lawn, and garden supplies[1]	Combines "Miscellaneous household products" and "Lawn and garden supplies."

See footnotes at end of table.

Table 3. Continued—Title and definition changes in the Consumer Price Index, beginning with January 1987 data

New series title	Definition change
Gardening and other household services	Combines "Moving, storage, freight, household laundry and dry cleaning services" with "Gardening and lawn care services," which was previously unpublished.
Indoor plants and fresh flowers	
Care of invalids, elderly and convalescents in the home	Not published initially, will be published when sample is adequate
Apparel	
Men's suits, sport coats, coats, and jackets[1]	Combines "Men's suits, sportcoats, and jackets" and "Men's coats and jackets."
Women's underwear, nightwear, hosiery, and accessories (Old title—Women's underwear, nightwear, and hosiery)	Adds women's accessories.
Sewing materials, notions, and luggage	Combines "Sewing materials and notions" with part of "Jewelry and luggage."
Watches	Formerly was part of "Jewelry and luggage."
Jewelry	Formerly was part of "Jewelry and luggage." Excludes watches.
Transportation	
New cars (Old title—Same)	Transaction expenditure not reduced by market value of vehicle traded in.
New trucks[1]	Transaction expenditure not reduced by market value of vehicle traded in.
New motorcycles	Transaction expenditure not reduced by market value of vehicle traded in.
Used cars (Old title—Same)	Purchase of used cars from the business sector. Excludes value of used cars sold or traded by consumers.
Automobile registration, licensing, and inspection fees[1]	Combines "State registration," "Automobile inspection," "Local registration" (unpublished), and "Drivers' license."
Other automobile related fees (Old title—Same)	Adds rentals of vehicle equipment
Other intercity public transportation[1]	Combines "Intercity bus fares" and "Intercity train fares"
Intracity public transportation[1]	Combines "Intracity mass transit" and "Taxi fare."
Medical care	
Prescription drugs (Old title—Same)	Adds benefits paid by consumer-purchased insurance
Nonprescription drugs and medical supplies (Old title—Same)	Excludes eyeglasses.
Physicians' services (Old title—Same)	Adds benefits paid by consumer-purchased insurance.
Dental services (Old title—Same)	Adds benefits paid by consumer-purchased insurance.
Eye care	Includes all consumer out-of-pocket expenses for eye care commodities and services as well as benefits paid by consumer-purchased insurance.
Services by other medical professionals	Includes services rendered by therapists, nurses, and other practitioners including both out-of-pocket expenses and benefits paid by consumer purchased insurance.
Hospital and related services (Old title—Hospital and other medical services)	Adds previously unpriced outpatient hospital services.
Hospital room (Old title—Same)	Adds benefits paid by consumer-purchased insurance.
Other inpatient services	Consists of other hospital and inpatient services including nursing and convalescent home service, paid out of pocket as well as benefits paid by consumer-purchased insurance.
Outpatient services	Consists of emergency room services, laboratory fees, and x-rays, including both out-of-pocket expenses and benefits paid by consumer purchased insurance.
Health insurance (unpublished) (Old title—Same)	Portion of premium paid by consumer not paid out in benefits.
Entertainment	
Sport vehicles, including bicycles[1]	Combines "Sport vehicles" and "Bicycles."
Other sporting goods[1]	Combines "Indoor and warm weather sport equipment" and "Other sporting goods and equipment" as well as equipment for water sports.
Club memberships	Formerly part of "Fees for participant sports."
Fees for participant sports, excluding club memberships	Portion of "Fees for participant sports" exclusive of club membership dues and fees.
Fees for lessons or instructions	Formerly part of "Other entertainment services."
Other entertainment services (Old title—Same)	Includes film processing, photographer fees, veterinarian services, pet services, and rental of miscellaneous entertainment equipment.

See footnotes at end of table.

Table 3. Continued—Title and definition changes in the Consumer Price Index, beginning with January 1987 data

New series title	Definition change	New series title	Definition change
Other goods, services		Legal fees	Consists of the legal fees portion of "Personal expenses."
Tobacco and smoking products (Old title—Tobacco products)		Banking and accounting expenses	Consists of the safe deposit box rental and bank service charge portion of "Personal expenses" plus fees for accounting services not previously priced.
Other toilet goods and small personal care appliances, including hair and dental products[1]	Combines "Products for the hair, hairpieces, and wigs," "Dental and shaving products," and "Other toilet goods and small personal appliances."	Funeral expenses	Consists of the funeral services portion of "Personal expenses" plus charges for cemetery lots and vaults not previously priced.
Child daycare/nursery school	Not published initially; will be published when sample is adequate.		
Technical and other tuition	Not published initially; will be published when sample is adequate.		

[1] Historical data available back to January 1978.

[2] Historical data available back to January 1967.

[3] Historical data available back to January 1984.

––––NOTE TO TABLE 3––––

The following item strata are being discontinued, but a corresponding sub-strata index will be available:

Other breads
Fresh biscuits, rolls, and muffins
Fresh cakes and cupcakes
Cookies
Crackers and bread and cracker products
Fresh sweetrolls, coffee cake, and donuts
Frozen and refrigerated bakery products and fresh pies, tarts, and turnovers
Ham other than canned
Pork sausage
Other pork
Frankfurters
Bologna, liverwurst, salami
Other lunchmeats
Lamb and organ meats
Butter
Other dairy products
Frozen fruit and fruit juices
Other fruit juices
Cut corn and canned beans except lima
Other processed vegetables
Candy and chewing gum
Other sweets
Margarine
Other fats, oils, salad dressing
Nondairy substitutes and peanut butter
Roasted coffee
Instant and freeze-dried coffee
Seasonings, olives, pickles, relish
Other condiments
Miscellaneous prepared food and baby foods
Other prepared foods
Whiskey at home
Other alcoholic beverages at home
Household linens
Curtains, drapes, slipcovers, sewing materials
Soaps and detergents
Other laundry and cleaning products
Cleansing and toilet tissue, paper towels, and napkins
Stationery, stationery supplies, and gift wrap
Men's suits, sport coats, and jackets
Men's coats and jackets
Boys' coats, jackets, sweaters, and shirts
Boys' suits, trousers, sport coats, and jackets
Girls' coats, jackets, dresses, and suits
Girls' separates and sportswear
State automobile registration
Products for hair, hair pieces, wigs

A sub-strata index will not be available for the following items:

Canned ham
Cola drinks excluding diet cola
Other carbonated drinks
Paint, wallpaper supplies, tools, equipment
Lumber, awnings, glass, masonry materials
Plumbing, electrical, heating, cooling supplies and equipment
Other property maintenance and repair commodities
Stoves, dishwashers, vacuums, and sewing machines
Office machines, small electric appliances, and air conditioners
Miscellaneous household products
Lawn and garden supplies
Moving, storage, freight, household laundry, and dry cleaning
Boys' furnishings
Girls' underwear, nightwear, hosiery and accessories
Sewing materials and notions
Driver's license
Automobile inspection
Intercity bus fares
Intercity train fares
Intracity mass transit
Taxi fare
Anti-infective drugs
Tranquilizers and sedatives
Circulatories and diuretics
Hormones, diabetic drugs, biologicals, and prescription medical supplies
Pain and symptom control drugs
Supplements, cough and cold preparations, and respiratory agents
Eyeglasses
Other professional (medical) services
Other hospital and medical care services
Sports vehicles
Bicycles
Indoor, warm weather sport equipment
Other sporting goods and equipment
Dental and shaving products
Other toilet goods and personal care appliances
Cigarettes
Other tobacco products and smoking accessories

Table 4. Consumer Price Index sample areas and regions, by size classes, publication schedule, and 1980 and 1970 population weights

Sample areas or counties	Publication schedule	1980 CPI population weight		1970 CPI population weight	
		CPI-U	CPI-W	CPI-U	CPI-W
Northeast region	Monthly	23.997	22.987	28.521	27.468
Metropolitan areas of 1.2 million and above	Monthly	16.241	15.150	16.743	17.452
New York-Northern New Jersey-Long Island, NY-NJ-CT	Monthly	9.252	8.426	10.006	10.401
New York portion:					
Bronx, Kings, New York, Queens, Richmond, Nassau, Orange, Putnam, Rockland, Suffolk, Westchester					
New Jersey portion:					
Bergen, Essex, Hudson, Hunterdon, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union					
Connecticut portion:					
Fairfield, Litchfield (part), New Haven (part)					
Philadelphia-Wilmington-Trenton, PA-DE-NJ-MD	Monthly	2.920	2.834	2.825	3.023
Pennsylvania portion:					
Bucks, Chester, Delaware, Montgomery, Philadelphia					
New Jersey portion:					
Burlington, Camden, Cumberland, Gloucester, Mercer, Salem					
Delaware portion:					
New Castle					
Maryland portion:					
Cecil					
Boston-Lawrence-Salem, MA-NH	Bimonthly[1]	2.141	1.884	1.737	1.658
Massachusetts portion:					
Bristol (part), Essex, Middlesex (part), Norfolk (part), Plymouth (part), Suffolk, Worcester (part)					
New Hampshire portion:					
Hillsborough (part), Rockingham (part)					
Pittsburgh-Beaver Valley, PA	Bimonthly[2]	1.276	1.327	1.403	1.510
Allegheny, Beaver, Fayette, Washington, Westmoreland					
Buffalo-Niagara Falls, NY	Semiannually	.653	.678	.772	.860
Erie, Niagara					
Northeast metropolitan areas of 500,000 to 1.2 million	Monthly	3.579	3.663	4.331	4.473
Northeast metropolitan areas of 75,000 to 500,000	Monthly	3.088	3.124	3.688	3.800
Northeast nonmetropolitan areas of 2,500 to 75,000	None	1.080	1.030	1.759	1.743
North Central region	Monthly	24.608	26.795	26.508	28.663
Metropolitan areas of 1.2 million and above[3]	Monthly	13.282	14.585	12.982	14.691
Chicago-Gary-Lake County, IL-IN-WI	Monthly	4.039	4.550	4.436	5.180
Illinois portion:					
Cook, Du Page, Grundy, Kane, Kendall, Lake, McHenry, Will					
Indiana portion:					
Lake, Porter					
Wisconsin portion:					
Kenosha					
Detroit-Ann Arbor, MI	Bimonthly[2]	2.363	2.587	2.497	2.833
Lapeer, Livingston, Macomb, Oakland, St Clair, Washtenaw, Wayne					
St Louis-East St Louis, MO-IL	Bimonthly[1]	1.201	1.208	1.376	1.511
Missouri portion:					
Franklin, Jefferson, St Charles, St Louis, St Louis City					
Illinois portion:					
Clinton, Jersey, Madison, Monroe, St Clair					
Cleveland-Akron-Lorain, OH	Bimonthly[1]	1.478	1.675	1.208	1.391
Cuyahoga, Geauga, Lake, Lorain, Medina, Portage, Summit					
Minneapolis-St Paul, MN-WI	Semiannually	1.156	1.228	1.118	1.148
Minnesota portion:					
Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Washington, Wright					
Wisconsin portion:					
St Croix					
Milwaukee, WI	Semiannually	.740	.851	.803	.918
Milwaukee, Ozaukee, Washington, Waukesha					
Cincinnati-Hamilton, OH-KY-IN	Semiannually	.855	.946	.787	.865
Ohio portion:					
Butler, Clermont, Hamilton, Warren					
Kentucky portion:					
Boone, Campbell, Kenton					
Indiana portion:					
Dearborn					
Kansas City, MO-Kansas City, KS	Semiannually	.754	.859	.757	.845
Missouri portion:					
Cass, Clay, Jackson, Lafayette, Platte, Ray					
Kansas portion:					
Johnson, Leavenworth, Miami, Wyandotte					
North Central metropolitan areas of 380,000 to 1.2 million	Monthly	3.189	3.683	3.912	4.320
North Central metropolitan areas of 75,000 to 380,000	Monthly	5.078	5.377	5.360	5.521
North Central nonmetropolitan areas of 2,500 to 75,000	Monthly	3.081	3.050	4.254	4.131

See footnotes at end of table.

Table 4. Continued—Consumer Price Index sample areas and regions, by size classes, publication schedule, and 1980 and 1970 population weights

Sample areas or counties	Publication schedule	1980 CPI population weight		1970 CPI population weight	
		CPI-U	CPI-W	CPI-U	CPI-W
Southern region	Monthly	30 087	30 287	27 794	[illegible]
Metropolitan areas of 1.2 million and above[3]	Monthly	10 304	10 279	7 298	[illegible]
Washington, DC-MD-VA District of Columbia portion: Washington, DC Maryland portion: Calvert, Charles, Frederick, Montgomery, Prince Georges Virginia portion: Arlington, Fairfax, Loudoun, Prince William, Stafford, Alexandria City, Fairfax City, Falls Church City, Manassas City, Manassas Park City	Bimonthly[1]	1 768	1 489	1 786	[illegible]
Dallas-Fort Worth, TX Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant	Bimonthly[2]	1 556	1 793	1 405	1 538
Baltimore, MD Anne Arundel, Baltimore, Carroll, Harford, Howard, Queen Annes, Baltimore City	Bimonthly[1]	1 124	1 164	1 201	1 116
Miami-Ft. Lauderdale, FL Broward, Dade	Bimonthly[1]	1 526	1 267	831	[illegible]
Houston-Galveston-Brazoria, TX Brazoria, Fort Bend, Galveston, Harris, Liberty, Montgomery, Waller	Bimonthly[2]	1 621	1 974	1 147	[illegible]
Atlanta, GA Barrow, Butts, Cherokee, Clayton, Cobb, Coweta, De Kalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Newton, Paulding, Rockdale, Spalding, Walton	Semiannually	1 118	1 234	928	[illegible]
Southern metropolitan areas of 450,000 to 1.2 million	Monthly	7 938	8 272	7 883	[illegible]
Southern metropolitan areas of 75,000 to 450,000	Monthly	7 881	7 812	7 706	[illegible]
Southern nonmetropolitan areas of 2,500 to 75,000	Monthly	3 973	3 923	4 915	4 611
Western region	Monthly	21 299	19 952	19 177	17 580
Metropolitan areas of 1.2 million and above[3]	Monthly	14 116	13 548	9 319	[illegible]
Los Angeles-Anaheim-Riverside, CA Orange, Riverside, San Bernardino, Los Angeles, Ventura	Monthly	6 291	6 201	5 443	5 362
San Francisco-Oakland-San Jose, CA Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma	Monthly	3 156	2 855	2 131	1 984
Seattle-Tacoma, WA King, Pierce, Snohomish	Semiannually	1 193	1 196	[illegible]	[illegible]
San Diego, CA San Diego	Semiannually	987	803	[illegible]	[illegible]
Portland-Vancouver, OR-WA Oregon portion: Clackamas, Multnomah, Washington, Yamhill Washington portion: Clark	Semiannually	744	771	[illegible]	[illegible]
Denver-Boulder, CO Adams, Arapahoe, Boulder, Denver, Douglas, Jefferson	Semiannually	929	945	750	[illegible]
Western metropolitan areas of 330,000 to 1.2 million[3]	Monthly	2 787	2 550	4 915	[illegible]
Honolulu, HI Honolulu	Semiannually	320	296	344	[illegible]
Western metropolitan areas of 75,000 to 330,000[3]	Monthly	2 611	2 301	3 028	[illegible]
Anchorage, AK Anchorage Borough	Semiannually	086	077	070	[illegible]
Western nonmetropolitan areas of 2,500 to 75,000	None	1 785	1 553	1 915	[illegible]
Urban areas by size					
All metropolitan areas over 1.2 million	Monthly	53 922	53 661	46 342	48 437
Midsized metropolitan areas Northeast: 500,000 to 1.2 million North Central: 360,000 to 1.2 million South: 450,000 to 1.2 million West: 330,000 to 1.2 million	Monthly	17 483	18 168	21 041	[illegible]
Small metropolitan areas Northeast: 75,000 to 500,000 North Central: 75,000 to 360,000 South: 75,000 to 450,000 West: 75,000 to 330,000	Monthly	[illegible]	18 616	19 776	18 489
All nonmetropolitan areas 2,500 to 75,000	Monthly	9 919	9 555	12 841	[illegible]

[1] Odd months (Jan., Mar., May, July, Sept., Nov.)
[2] Even months (Feb., Apr., June, Aug., Oct., Dec.)
[3] Includes areas not identified separately.

NOTE: The size class boundaries have changed since 1978. As shown above, the boundaries between the midsized and small areas are variable. Previously, the limits were 1.25 million and above, midsized—385,000 to 1.25 million, small—75,000 to 385,000, and less than 75,000.

Senator PROXMIRE. Thank you, Madam Commissioner. Madam Commissioner, the most striking thing it seems to me about our economy over the last year or so is that it has been growing so slowly.

Last year the growth in the economy was only 2.5 percent, and when you consider the enormous stimulative action taken by the Congress in a most irresponsible fiscal policy in history, and year after year after year of huge deficits, and then a policy in the last more than year of the Federal Reserve Board pumping money into the economy at the most rapid rate relative to the gross national product ever, in spite of that the economy grew last year by 2.5 percent and in the last quarter by only 1.3 percent.

What I can't understand is how that slow rate of growth and with an increase in the labor force of 2 percent and with a productivity growth of 0.6 percent why there is any improvement at all in unemployment. It isn't much; as a matter of fact, in the last 3 months it has been exactly the same. It didn't improve. Is that right?

Mrs. NORWOOD. For the last 3 months the unemployment rate has——

Senator PROXMIRE. It's been flat.

Mrs. NORWOOD. Yes.

Senator PROXMIRE. But if this slow rate of growth continues, in view of the growth of the labor force that we can expect, isn't it likely that unemployment should increase in coming months if that continues, if the growth rate continues at the present level?

Mrs. NORWOOD. Well, first, Mr. Chairman, the forecasts that I have seen, and I try to cover the waterfront of them, all seem to be forecasting an increase of somewhere around 3 or 3.5 percent for this coming year. A lot depends, however, on what happens to our foreign trade account, and that in turns depends in large part on what happens to the economies of Japan and of Germany. So I think we have those uncertainties out there. What we are seeing is a restructuring, a real restructuring of industry which, it seems to me, is making us somewhat leaner in the goods producing area.

Senator PROXMIRE. Somewhat what?

Mrs. NORWOOD. Leaner and somewhat more efficient. We are seeing an increase in hours rather than an increase in employment.

Senator PROXMIRE. Well, do we have evidence of a leaner and more efficient economy when the productivity is up by a pathetic six-tenths of 1 percent? On the basis of our historic experience that's a very feeble rate of increase, is it not?

Mrs. NORWOOD. Our overall productivity rate is much slower than I think any of us would like it to be, but our manufacturing productivity is doing quite well.

Senator PROXMIRE. Manufacturing I would agree, but manufacturing does not account for most of our economy. It's only, what, about a third?

Mrs. NORWOOD. Well, that's true, but the point is that we are seeing growth in services and some small reductions in manufacturing employment. We are not seeing growth in manufacturing, and I think that that is because of the restructuring which is resulting in increased productivity because output is holding up.

Senator **Proxmire**. Now I would like to refer to your news release that you gave us this morning, the Employment Situation for February of 1987. Under percent of labor force unemployment rates, and taking it by ethnic identification, white employment is down two-tenths of a percent, black is unchanged, and Hispanic is down a full 1 percent. Now in view of those drops, why is it that there is no change in the overall rate? I mean that includes everybody and the categories are only white, black, and Hispanic. Overall they indicate a fall here, and yet you tell us that there is no change. How do you account for that?

Mrs. **Norwood**. That sometimes happens with composition of the various groups. We had, for example, very small changes in each of these groups.

Senator **Proxmire**. Well, white is two-tenths of a percent. That's a significant change, isn't it?

Mrs. **Norwood**. Yes. It's statistically significant but, as we've discussed many times, we need to look at this over a period of some time.

Mr. Plewes tells me that there has been some rounding involved in some of these numbers. I think the important thing is that January is a month with very, very strong seasonals. February is a month when there is very little seasonality. February data seem to have supported the stability in the unemployment situation that we had in January, and I think that is an important thing.

Senator **Proxmire**. Let me ask you this. I think a lot of us were shocked and surprised to see that the Japanese are moaning and groaning about an increased unemployment at 3 percent; they're shocked. They say under these circumstances they have to take some kind of drastic action. How can it be that the Japanese have an unemployment rate that has been consistently below 3 percent, often well below 3 percent, and they haven't had an inflation problem, and we people argue that if our unemployment rate gets down much below where it is now, gets down to below 6 or 5 percent that we're in real trouble. What is the difference in the two economies that accounts for that startling situation?

Mrs. **Norwood**. There are really extraordinary differences in the labor markets of the two countries. The Japanese have in the past at least had a lifetime employment kind of approach in which regular full-time workers are shielded from unemployment. There is a large segment of part-time, temporary, and seasonal workers who tend to bear the brunt of downturns. These nonregular workers tend to bypass unemployment status, withdrawing from the labor force when the economy slackens.

A lot has to do with perceptions as well. We have become used to a little bit higher rates, both for inflation and for unemployment. But I think something else that is very different is that the managerial, the white collar workers in Japan are somewhat different. They have become much more involved in the company than our managers have. I think that is changing. I think the Japanese are going to become more like us and we're going to become more like the Japanese.

But one of the big differences is a dynamic character to our labor market with lots of movement and more stability in their labor market with people taking a job and staying with one company and being guaranteed a job.

Senator PROXMIRE. That's very helpful and it might be useful for us to see if there are studies that have been made of the differences here.

Mrs. NORWOOD. We have done some.

Senator PROXMIRE. What's that?

Mrs. NORWOOD. We have done some.

Senator PROXMIRE. Will you make those available to the committee?

Mrs. NORWOOD. Yes.

Senator PROXMIRE. I would be very interested in that.

[The following information was subsequently supplied for the record:]

[From the Monthly Labor Review, March 1984]

Japan's low unemployment: an in-depth analysis

A BLS analysis of Japan's labor force data concludes, in contrast to a private study, that Japanese unemployment rates are only slightly understated relative to U.S. concepts

CONSTANCE SORRENTINO

Japan's unemployment rates have long been among the lowest in the world. From 1960 through 1974, joblessness in Japan averaged 1.3 percent and never exceeded 1.7 percent, according to the Japanese labor force survey. Among the major industrial countries, only Germany had a better labor market performance. Japan's employment situation worsened after the 1973 world oil crisis and, since 1975, Japanese unemployment has been more than 2 percent, currently 2.6 percent. By contrast, unemployment rates in most Western industrial nations are now 3 to 5 times as high.

These relatively low Japanese unemployment rates, even in times of recession, suggest that the rates may be understated as compared with Western countries because of definitional or conceptual differences. Some recent articles or studies have come to this conclusion.

For example, a thoughtful article by Koji Taira in the July 1983 *Review* presented a timely analysis of Japan's low unemployment rate. Using data from Japan's special March labor force surveys and U.S. definitions of unemployment, Taira adjusted official Japanese rates to approximate U.S. concepts. He concluded that the Japanese jobless rate would be "nearly double the official unemployment rate" if U.S. concepts were used.[1]

The BLS does not agree with Taira's conclusion. We argue that he does not give weight to the fact that March is a very unusual month for the Japanese labor market. March is the end of the fiscal year, when firms there traditionally hire new workers, and the end of the school year, when graduates flood the labor market.

Taira's major adjustment to the Japanese unemployed is the addition of March school graduates who are waiting to start jobs within 30 days. Although he is aware that promises of employment to graduates in Japan are almost never withdrawn, Taira proceeds to abstract from this economic and cultural effect and treat the graduates waiting to start jobs as if they were in the United States where employment offers are nowhere near as firm. Moreover, normally no such large body of persons would be waiting to begin jobs in 30 days, hence, it is more realistic not to count them as part of the unemployed. Taking this and some other more minor differences with Taira into account, we find that Japanese unemployment rates are only slightly understated in relation to U.S. concepts.

Although we challenge Taira's conclusion that Japanese unemployment is considerably understated, we agree that the Japanese labor market is, in many ways, unique. Institutions, attitudes, and economic and social structures are certainly different in Japan than they are in the United States. Indeed, it is in these differences, rather than in statistical methods and definitions, where we find the real reasons for the low unemployment rates in Japan. These differences tend to push Japanese labor slack into underemployment and hidden unemployment. After a detailed analysis of Taira's work, this article presents expanded unemployment rates—incorporating several forms of labor underutilization—which

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draw the Japanese rate somewhat closer to U.S. levels. These expanded rates include several of Taira's adjustments according to what we believe is the more appropriate context.

Current BLS method

Since the early 1960's, the Bureau of Labor Statistics has prepared and published adjusted unemployment rates approximating U.S. concepts for major industrial countries, including Japan.[2] Table 1 shows the annual figures for 1970–82 as reported by Japan and as adjusted by BLS to approximate U.S. concepts.

The method of adjustment is explained in detail in a 1978 bulletin, *International Comparisons of Unemployment*.[3] The bulletin outlines several differences between U.S. and Japanese unemployment concepts, but the Bureau made no adjustments because relevant data were not then available. It noted that Japan's method of computing unemployment "results in a slight understatement of Japanese unemployment under U.S. concepts."[4]

Since that bulletin was published, data from Japan's 1977–1980 special March surveys have become available, making it possible, to some extent, to quantify the differences between Japanese and U.S. unemployment concepts. However, the March survey results have not been incorporated into the BLS adjustment method. There are several reasons for this. First, the data are ambiguous in many respects and, therefore, subject to different interpretations. Second, the fact that they are for an atypical month of the year requires caution in their use. Third, the relevant data are available only for the period 1977 through 1980. Special March surveys were conducted before 1977 and after 1980, but these surveys used somewhat different questionnaires and the information required for adjustments was not collected. And finally, because the BLS analysis of the March surveys for 1977–80 shows that the Japanese unemployment rate is, at most, understated by only 0.1 to 0.4 percentage point, it was decided that the official Japanese unemployment figures provided a good enough basis for international comparisons. The following tabulation shows the official Japanese unemployment rates as published by Japan and as adjusted by Taira and BLS to approximate U.S. concepts and rates for the United States, March 1977–80, including Armed Forces (the data are not seasonally adjusted):

Year	*Official rates*	*Taira method*	BLS *method*	*United States*
1977	2.4	4.2	2.8	7.8
1978	2.6	4.7	3.0	6.5
1979	2.5	4.5	2.7	6.0
1980	2.2	3.8	2.3	6.5

Table 1. Japanese unemployments rates, official and adjusted by BLS to approximate U.S. concepts, 1970–82

[In percent]

Year	Official rates	Adjusted rates, based on	
		Total labor force	Civilian labor force
1970	1.1	1.2	1.2
1971	1.2	1.2	1.3
1972	1.4	1.4	1.4
1973	1.3	1.3	1.3
1974	1.4	1.4	1.4
1975	1.9	1.9	1.9
1976	2.0	2.0	2.0
1977	2.0	2.0	2.0
1978	2.2	2.3	2.3
1979	2.1	2.1	2.1
1980	2.0	2.0	2.0
1981	2.2	2.2	2.2
1982	2.4	2.4	2.4

NOTE: Official rates are on a total labor force basis (including Armed Forces).

Whether the Japanese rate is 2.4 or 2.8 percent, it is still far lower than in most of the other industrial countries.

BLS makes two adjustments in the official Japanese labor force to put it on a U.S. basis: (1) unpaid family workers[5] who worked fewer than 15 hours (about 500,000) are subtracted because such workers are excluded from the U.S. labor force; and (2) for comparisons of civilian unemployment rates, the National Defense Force (about 240,000) is subtracted from the Japanese labor force. These adjustments have very little effect, raising the official unemployment rate by only 0.1 percentage point in a few years.

U.S. and Japanese surveys compared

Until 1967, the Japanese survey closely paralleled the U.S. Current Population Survey. That year, the CPS was revised so that more specific questions on labor force status were asked, and a 4-week time period was specified for jobseeking activity on the part of unemployed persons.[6] No such questions have been added to the regular Japanese survey.

In the United States, an enumerator visits a home during the survey week, asks a series of questions, and fills out the survey form. In contrast, the enumerator in Japan visits the sample household prior to the survey week and leaves the survey form for the respondent to complete. At the end of the survey week, the enumerator visits the household again and collects the questionnaire, checking over the entries at that time.

Unemployment. The unemployed in the monthly Japanese survey are defined as all persons 15 years of age or over who did not work at all in the reference week and who were seeking work or awaiting the results of previous employment applications.

The Japanese questionnaire lists the following answers to the question "Was this person engaged in work at all during the survey week?"

1. Engaged mainly in work
2. Engaged partly in work besides attending school
3. Engaged partly in work besides home duties, etc.
4. Had a job but did not work

5. Had no job but seeking one
6. Attending school
7. Engaged in home duties
8. Other

Persons checking response number 5—"had no job but seeking one"—are classified as unemployed. This response is defined in the survey explanatory notes: "Refers to the person who had no job but was actually seeking work by answering advertisements in the newspaper, applying at the Public Employment Security Office, etc. Also refers to the person who is waiting for an answer to an application and is able to take up a job immediately after he finds one."

The Japanese definition of unemployment appears to be more restrictive than the U.S. definition. Excluded from the unemployed in Japan, but included in the United States, are:

- Persons on layoff who were waiting to return to their jobs
- Temporarily ill jobseekers who were not in a condition to begin work immediately
- Persons who were actively seeking work in the past 4 weeks, but who took no active steps in the survey week and were not awaiting the results of a previous job application
- Persons without a job and waiting to report to a new job within 30 days. (In the United States, there is no direct question on this point, but those who volunteer the information that they are waiting to start a new job in 30 days are classified as unemployed).

However, there are persons classified as unemployed in Japan who would be considered "not in the labor force" in the United States. The Japanese definition does not require active workseeking within the past 4 weeks for classification as unemployed. Such active workseeking is required in the U.S. survey, except for persons on layoff who are awaiting recall and persons waiting to begin a new job. Because these latter two groups are not within the Japanese concept of unemployment, all of the reported Japanese unemployed would be subject to the "workseeking in the past 4 weeks" criterion for comparability with U.S. concepts.

Labor force. There are several differences between U.S. and Japanese concepts of the labor force. The Japanese labor force consists of all persons age 15 and over who worked, had a job but did not work, or were seeking work in the reference week. As noted, Japan includes and the United States excludes unpaid family workers who worked less than 15 hours in the survey week. The number of such persons is regularly reported in the Japanese survey. Persons with a paid job but not at work during the survey week are in the U.S. labor force whether or not they receive pay for the time off; in Japan, these workers must have received pay to be considered in the labor force (however, we do not adjust for this because Japanese employees normally receive pay when absent from work).

The Armed Forces are included in the U.S. definition of the labor force, effective beginning in January 1983. The Japanese labor force also includes military personnel. Japan includes and the United States excludes inmates of institutions in the survey universe. However, Japan classifies nearly all inmates as not in the labor force. Again, no adjustment is necessary. A number of unemployed persons officially classified as "not in the labor force"—such as those waiting to start a new job—should also be added to the Japanese labor force for comparability with U.S. concepts. However, some of the officially unemployed should be subtracted. The special March surveys provide these data.

The special March surveys

To supplement the regular monthly labor force survey, the Japanese conduct special surveys each March which probe deeper into the labor force status of the population than do the regular monthly surveys. These special surveys provide much greater detail concerning the conditions of unemployment and underemployment, reasons for unemployment, jobseeking activities, and time of last job search. Employed persons are questioned on their desire to change jobs, and short-time workers are asked about their desire for more work. The special surveys also delve into the job desires of persons classified as "not in the labor force."

Reference periods and definitions are identical in both the special surveys and the regular surveys. Both are self-enumerations. The sample size of the March surveys was half that of the regular surveys until 1980 when the size was increased to about seven-eights that of the regular survey. The surveys refer to the week ending March 31.

Results of the special surveys for 1977 through 1980 can be used to analyze the magnitude of the differences between U.S. and Japanese unemployment concepts. However, the results do not allow for a complete and unambiguous adjustment of Japanese unemployment to U.S. concepts.

March: a most unusual month. March is a time of extensive churning in an ordinarily calm labor market. The Japanese fiscal year begins on April 1. New hiring of permanent staff by Japanese firms traditionally occurs in the month or two prior to the beginning of the fiscal year, to be effective April 1.[7] In addition, graduation from junior and senior high schools and colleges occurs in the late February to early March period. The new school graduates receive and accept job offers several months before leaving school.[8] This practice of job prearrangement is one of the reasons Japan maintains very low levels of youth unemployment compared with other countries where youth often do not prearrange their job before leaving school (when they would not be classified as unemployed because they are not currently available for work). With graduation generally occurring in early March, there is a period of a few weeks when the school graduates are waiting to begin their new jobs. This explains why the March surveys report a very large number of persons waiting to begin new jobs—they are mainly new school graduates. The March figures also include other persons who have been hired to report at the beginning of the fiscal year. In no other month but March would a similar situation occur.

Labor turnover data by month for 1977 through 1980 show that both accessions and separations are at yearly highs in April—the accession rate is more than 3 times as high as the annual average; the separation rate is nearly twice as high. (See table 2.) Clearly, April is the month in which labor turnover peaks and March is the month when the number of persons waiting to begin a new job is the highest.

Also, Japanese monthly unemployment rates for 1977 through 1980 show March as the high month for unemployment. (See table 3.) Seasonal adjustment lowers the March figures by 0.3 to 0.4 percentage point—a larger seasonal adjustment than for any other month.

Because of the extensive hiring which occurs in March, the special surveys most likely record larger than usual numbers of persons who are classified as "not in the labor force" but who tested the job market that month. These persons report in the March surveys that they had looked for work earlier in the month, although not in the survey week (the week ending March 31), and that they are available for work. Many of them become discouraged and give up jobseeking by the time of the survey week. Because they sought work during the month and were available for work, they would be classified as unemployed under U.S. concepts. However, their numbers are probably at a seasonal high in March. They are attracted into the labor force by the prospect of hiring for the beginning of the fiscal year. In other months, when hiring falls to more normal levels, the number of such jobseekers would also fall.

Table 2. Labor turnover in Japan by month, annual averages, 1977–80

[Per 100 employees]

Month	1977		1978		1979		1980	
	Accessions	Separations	Accessions	Separations	Accessions	Separations	Accessions	Separations
January	1.0	1.8	1.0	1.7	.9	1.6	.9	1.7
February	1.2	1.5	1.1	1.5	1.0	1.4	1.3	1.4
March	1.9	1.8	1.7	1.8	1.7	1.7	1.8	1.8
April	5.4	3.0	5.1	3.0	5.1	2.8	5.7	3.1
May	1.4	1.7	1.3	1.7	1.6	1.7	1.5	1.7
June	1.2	1.4	1.1	1.3	1.3	1.4	1.2	1.3
July	1.1	1.4	1.1	1.3	1.2	1.4	1.2	1.3
August	1.0	1.5	.9	1.3	1.1	1.5	1.1	1.4
September	1.2	1.5	1.1	1.4	1.3	1.4	1.2	1.4
October	1.3	1.5	1.2	1.4	1.4	1.5	1.3	1.4
November	1.1	1.2	1.1	1.1	1.3	1.1	1.2	1.1
December	.9	1.3	.9	1.1	.9	1.2	.9	1.3
Annual average	1.6	1.6	1.5	1.6	1.6	1.6	1.6	1.6
April as percent of annual average	338	188	340	188	319	175	356	194

NOTE: Data are for establishments with 30 employees or more in the industrial and service sectors.

SOURCE: Japanese Ministry of Labour, *Yearbook of Labour Statistics*, 1977 through 1980 editions.

Table 3. Original and seasonally adjusted unemployment rates in Japan, annual averages, 1977–80

[In percent]

Month	1977		1978		1979		1980	
	Original	Seasonally adjusted	Original	Seasonally adjusted	Original	Seasonally adjusted	Original	Seasonally adjusted
January	2.2	1.9	2.4	2.1	2.3	2.1	2.1	1.9
February	2.3	2.0	2.5	2.2	2.2	2.0	2.0	1.9
March	2.4	2.0	2.6	2.2	2.5	2.1	2.2	1.9
April	1.9	1.9	2.2	2.2	2.2	2.2	2.1	2.0
May	2.0	2.1	2.2	2.3	2.0	2.0	1.9	2.0
June	2.0	2.1	2.2	2.3	1.9	2.1	1.8	2.0
July	1.9	2.1	2.1	2.2	2.0	2.2	1.9	2.1
August	1.9	2.0	2.2	2.3	2.1	2.1	2.0	2.1
September	1.9	2.0	2.2	2.4	1.9	2.0	1.9	2.0
October	1.8	1.9	2.1	2.2	2.0	2.1	2.0	2.1
November	1.9	2.0	2.1	2.2	2.0	2.1	2.1	2.2
December	2.1	2.1	2.1	2.2	1.9	2.0	2.1	2.2
Annual average	2.0	—	2.2	—	2.1	—	2.0	—

SOURCE: Prime Minister's Office, Statistics Bureau, *Annual Report on the Labour Force Survey*, 1980, p. 189.

It is difficult to draw conclusions from Japanese labor force data which are available only for March. (Unfortunately, the special surveys have not been conducted at any other time of the year.)[9] Only inferences can be made about what the March special surveys would show in a more typical month or on an annual average basis. In the following section, BLS takes into account the timing of the special surveys and makes some estimates which put the results on a more typical basis. In several instances, however, results are presented as "upper limits" because relevant data are not available on a typical basis.

Adjustment to U.S. concepts

The BLS method of adjusting the special March surveys to U.S. concepts is compared with the Taira method in table 4. There are four adjustments with regard to Japanese unemployment. The first, "inactive jobseekers" (Taira calls them "non-unemployed"), are subtracted from the Japanese unemployed count by both BLS and Taira, but the BLS adjustment is larger. The second and third, "jobseekers not in the labor force" (termed "job search in March and currently available for work" by Taira) and "persons waiting to begin new jobs," are added to the unemployed under both methods, but the BLS adjustments are smaller. The fourth adjustment, persons on temporary layoff (termed "layoffs, employed but closed down" by Taira) are added to the Japanese unemployed by Taira but not by BLS.

Both the BLS and Taira adjustments are presented on a "total labor force" basis which includes the Armed Forces. (The adjusted rates on a civilian basis are virtually the same as the rates using the total labor force concept because the Japanese National Defense Force is relatively small.)

Both BLS and Taira exclude unpaid family workers who worked less than 15 hours. However, the figures differ somewhat because BLS's figures are based on "actual status," while Taira's are based on "usual status." The "actual status" figures were used because they conform to the U.S. concept of employment. Furthermore, they are generally closer to the annual average number of unpaid family workers working less than 15 hours than the "usual status" figures. The size of the labor force is also affected by how many persons "not in the labor force" are reclassified as unemployed and how many unemployed are reclassified as "not in the labor force." (See table 4.)

Inactive jobseekers. These are persons who are reported as unemployed in Japan but who did not actively seek work during the month.

In the March special surveys, unemployed persons in Japan were asked the following question: "When did you last request or apply?" Accompanying this question are the instructions "include inquiring or demanding the result." There are three possible responses: (1) within this week; (2) in March; and (3) February or earlier. Thus, it is possible to determine the number of persons reported as unemployed in March whose last active search for work was prior to that month. There are a large number of such persons, amounting to more than 40 percent of the reported number of unemployed each March.

The explanation for the large number of inactive workseekers in Japan is that the survey questionnaire contains the instruction that unemployed persons may include those awaiting answers to applications for employment. Thus, persons who made their last request or application for work over 1 month ago but are still awaiting the answer (and did not inquire about it) may count themselves as unemployed.

According to the March special surveys, nearly 30 percent of the "inactive workseekers" listed their major job search method as applying to the Public Employment Service. Another 30 percent applied to employers or made requests with schools or acquaintances. Taira and BLS agree that these two groups—accounting for 60 percent of the "inactive jobseekers"—should be excluded from the Japanese unemployment count on the grounds that they did not take active steps to find work in March. However, Taira does not exclude the remaining persons who responded that their main search method was to (1) study want ads or consult with acquaintances; (2) prepare to start a business; or (3) other.

BLS disagrees with Taira's inclusion of these remaining groups in the unemployed. These persons neither took an active step to find work nor checked on any previous applications during the month. U.S. concepts require *specific* jobseeking activity within the past 4 weeks. Studying want ads in the newspaper is not sufficient; the actual placement or answering of an ad is required to be counted as unemployed. Checking with friends or relatives is considered as active jobseeking in the U.S. survey if such checking was done in the past 4 weeks. Those Japanese who "consulted with acquaintances" should also be held to the "past 4

Table 4. Adjustments of Japanese unemployment and labor force data to approximate U.S. concepts, March 1977–80

[Numbers in thousands]

Category	1977		1978		1979		1980	
	Taira	BLS	Taira	BLS	Taira	BLS	Taira	BLS
Reported unemployed	1,270	1,270	1,410	1,410	1,350	1,350	1,240	1,240
Less inactive jobseekers[1]	330	520	420	640	370	600	310	540
Plus jobseekers not in labor force who intended to start work immediately[2]	510	510	560	560	490	490	430	430
Less those not available due to housework or school	—	50	—	60	—	70	—	80
Plus persons waiting to begin a new job within 1 month	740	740	880	880	880	880	740	740
Less new school graduates	—	[3]440	—	520	—	560	—	550
Adjusted unemployed I	—	1,510	—	1,630	—	1,490	2,100	1,240
Plus layoffs[4]	100	100	140	140	140	140	([5])	([5])
Adjusted unemployed II	2,290	1,610	2,570	1,770	2,490	1,630	([5])	([5])
Reported labor force	53,430	53,430	54,240	54,240	54,770	54,770	55,370	55,370
Less family workers working less than 15 hours[6]	400	510	580	480	490	480	760	570
Less inactive jobseekers	330	520	420	640	370	600	310	540
Plus unemployed classified "not in labor force"[7]	1,250	760	1,440	860	1,370	740	1,170	540
Adjusted labor force	53,950	53,160	54,680	53,980	55,280	54,430	55,470	54,800
Unemployment rates								
Reported	2.4	2.4	2.6	2.6	2.5	2.5	2.2	2.2
Adjustment I	—	2.8	—	3.0	—	2.7	3.79	2.3
Adjustment II (including layoffs)	4.24	3.0	4.70	3.3	4.50	3.0	([5])	([5])

[1] Taira terms them "non-unemployed."

[2] Or "jobsearch in March and currently available."

[3] Estimated by BLS based on March 1978 proportions.

[4] Or "layoffs, employed but closed down."

[5] Not available.

[6] Taira's data are "usual status;" BLS's data are "actual status."

[7] Sum of jobseekers not in labor force and persons waiting to begin a new job (BLS figures are net).

NOTE: Dashes indicate no adjustment.

SOURCE: Professor Taira's data appeared in Koji Taira, "Japan's low unemployment: economic miracle or statistical artifact?", *Monthly Labor Review*, July 1983, p. 6.

weeks" test.

Thus, the BLS adjustment to exclude "inactive work-seekers" is higher than Taira's: 540,000 in March 1980, compared with Taira's 310,000.

Jobseekers not in the labor force. These are persons reported as "not in the labor force" who after further questioning reveal that they have sought work in the past 4 weeks and intend to begin work immediately. The BLS adjustment for these jobseekers is smaller than Taira's because BLS excludes persons who said they intended to begin work immediately but who were not available during the survey week because of housekeeping or school.

In the March special surveys, persons not in the labor force are asked the following probing questions:

a. Do you wish to do any work? (Question 8)
b. Do you intend to take up a job immediately if you find one? (Question 8a)
c. Why are you not now seeking a job despite your intention of taking up one? (Question 8b)
d. Have you been to the Public Employment Security Office, applied to other organizations, or consulted with acquaintances for a job this month? (Question 8c)

Responses to these questions show that a substantial number of persons classified as "not in the labor force" were actively seeking work during the month and currently available for work. The reason for this is the wording of the survey questionaire. Persons who regard themselves as mainly keeping house, going to school, or retired may check such responses rather than "seeking a job," even though they have also actively looked for work. This possibility is even more likely if the workseeking occurred earlier in the month rather than in the survey week, because the original question specifies "the survey week."

This entire section of the special survey is ambiguous. The ambiguities involve subtleties of translation as well as interpretation by respondents. Among those who said they "intend to take up a job immediately" in answer to item *b* are a number who respond that they are "unable to take up a job due to housekeeping or school" in answer to item *c*. The apparent explanation is that these persons would like to take up a job even though they cannot do so in the survey week.[10]

For an adjustment to U.S. concepts, it appears that some persons classified as "not in the labor force" should be added to the Japanese unemployment count. Taira adds all of those who said they looked for work in the month and intended to take it up immediately. At the least, BLS believes that those who were "unable to take up a job due to housework or school" should be subtracted from this adjustment because they were not currently available during the survey week. Hence, BLS's adjustment for this category is lower than Taira's, but even this reduced figure may be overstated. Because March is the traditional hiring period for Japanese firms, it is likely that a number of persons tested the job market in March and withdrew the following month after they found that there was no work available "near home" or "meeting their ability," and so forth. Thus, although these people were unemployed under U.S. concepts in March, they are probably not representative of the average number of such persons over the course of the year. Some further downward adjustment seems warranted, but none is made in table 4 because of the lack of relevant data.

Persons waiting to begin a new job. These are persons classified as "not in the labor force" who, after further questioning, say they expect to start work within 1 month. Taira adds all of these persons to the unemployed. BLS adds only a portion of them, adjusting for the overstatement which results from the end of Japan's school year.

Under Taira's adjustment, the number of persons waiting to begin a new job accounts for 35 percent of his adjusted unemployed. In relation to results for other countries, this proportion is unusually high. In the United States, Canada, and France such persons make up only about 2 to 5 percent of the unemployed.[11]

In the U.S. survey, persons waiting to begin a new job within 30 days are classified as unemployed if they are available to begin work immediately. The reasoning behind this is that, in many cases, the anticipated job does not materialize, and the waiting period actually represents the beginning or continuation of a period of unemployment.

In the regular Japanese monthly survey, no mention is made of the labor force classification of persons waiting to begin a new job. They are most likely enumerated as not in the labor force.

The special surveys elicit information on such persons in the question "Do you wish to do any work?" which is asked of all persons classified as not in the labor force. The possible responses to this question are as follows:

- Yes, if there is any
- Yes, if conditions are favorable
- A job is already available
  - to start within one month:
    - after graduation in March
    - other
  - to start after one month

The March surveys record a substantial number of persons who respond that a job was available within 1 month. The great majority are young persons who check "after graduation in March." There is nothing in the survey to indicate that these school graduates wanted to begin work or were even available to begin work earlier than April 1. In general, new graduates are not interested in beginning work any sooner than April 1. They generally travel during their last school vacation. Although graduation ceremonies are over, they are formally registered as students at school until March 31. Moreover, it is highly unlikely that there would be any of these school graduates in the "waiting to start a new job" category during any other month of the year.

The U.S. rationale for counting such persons as unemployed seems inapplicable to Japan, where, as Taira points out, job promises to school graduates are very firm, and cancellation of such promises is rare. Data on placement activities by Japanese employment offices indicate that in March 1977 through March 1980, there were virtually two job openings for every school-leaver applicant, and more than 99 percent of them were placed in jobs.[12]

Thus, it appears reasonable to omit the school graduates from the upward adjustment of the unemployed for three reasons: (1) they are probably not available for work prior to April 1; (2) they would not be included in the count in any month but March; and (3) there is hardly any chance that the jobs they are waiting to start will disappear.

Of the 740,000 persons "waiting to begin a new job within 1 month" in March 1980, 550,000 were school graduates. BLS has omitted the school graduates from the upward adjustment of Japanese unemployment. This leaves 190,000 persons who were not school leavers in March who were also waiting to begin new jobs. Such persons are probably slightly more open to the risk of their prospective jobs being canceled, although the risk would still be rather low. If included in the Japanese adjusted unemployed, they make up 15 to 20 percent of the total. As mentioned previously, such persons typically account for only 2 percent of U.S. unemployment.

The number of nonschool-leavers who are waiting to begin a new job in March is most likely inflated in terms of an annual average because April is the traditional hiring month in Japan. BLS includes all of them in the adjustment shown in table 4, with the reservation that they represent an upper limit for this adjustment.

Persons on layoff. Taira makes an adjustment to include persons on layoff in the Japanese unemployment count on the grounds that such persons are included in the U.S. concept of unemployment. Persons without work and awaiting recall to their former jobs are included in the U.S. unemployed, whether or not they were actively seeking work. However, the two countries' concepts and practices of "layoff" are so different that BLS believes no adjustment is warranted.[13] The reason for this is the overriding difference in job attachment. Persons awaiting recall are appropriately counted as unemployed in the United States because they are "jobless"—they are no longer on the firm's payroll, many are actively seeking work, and most are collecting unemployment benefits. By contrast, in Japan persons on layoff have work contracts or otherwise strong informal commitments from their employers and continue to receive their pay (partly subsidized through government payments to the firm), they do not seek other work, and they answer surveys to the effect that they have a job.

The BLS exclusion of persons on layoff from the Japanese unemployed is in accord with the recommendations of the International Labour Organization's 1982 Conference of Labour Statisticians.[14] In its revised standard definitions of employment and unemployment, the ILO takes into consideration the question of formal job attachment. Under the ILO standards, persons on temporary layoff are classified as employed if they have a formal job attachment (as determined by receipt of wages or salary or other factors). Persons on layoff with no formal job attachment are classified as unemployed.

BLS recognizes that persons on layoff represent a form of labor underutilization in all countries, whether they are classified as employed or unemployed. To enhance international comparisons of how labor markets are functioning, it would be desirable to measure and compare total labor slack—that is, unemployment, workers on layoff, workers on part time for economic reasons, and discouraged workers.

The special labor force surveys for March 1977 through March 1979 provide data on the number of Japanese classified as "employed, with a job but not at work" who were on temporary layoff. The category was dropped from the special surveys in 1980 on the grounds that it was inapplicable to the Japanese situation. Taira adds the persons on layoff to the Japanese unemployed count. Although BLS believes they should not be added, an alternative adjustment (II) is constructed in table 4 which includes these persons in the unemployed.

The outcome. The BLS adjusted rates are considerably lower than Taira's rates.[15] The largest adjustments are for 1977 and 1978, when the published Japanese jobless rates are increased by 0.4 percentage point by BLS. In 1979, the increase is 0.2 and in 1980, 0.1. It should be emphasized that these include "upper limit" adjustments in two cases—persons waiting to begin a new job and jobseekers "not in the labor force." Inclusion of persons on layoff raises the Japanese rate by another 0.2 to 0.3 percentage point.

The BLS estimates are considerably below the levels estimated by Taira even if persons on layoff are included. This is mainly because BLS has made adjustments to put the March surveys on a more typical basis by excluding the new school graduates who were waiting to take up their jobs. Taira's method has the effect of using the March surveys as representative of the Japanese labor market over the course of the year. Such an approach would be similar to using unadjusted data from a seasonally high unemployment month for the United States—such as June when students flood the labor market—and presenting them as our typical labor market situation for comparison with average annual activities in other countries.

Unemployment rate double for women

Although the overall Japanese unemployment rate is changed only slightly in our view when the March survey data are adjusted to U.S. concepts, there is a marked difference in the adjusted unemployment rates for men and women. The conventional Japanese data by sex show virtually no difference between the unemployment rates for men and women. According to the BLS method, the male-female differential is about the same as that obtained by Taira: the female rates are about double the male rates. The following tabulation shows unemployment rates for men and women, March 1977–80 (based on the civilian labor force, excluding layoffs):

	As published		*Approximating U.S. concepts*	
Period	*Men*	*Women*	*Men*	*Women*
1977	2.4	2.3	2.0	4.3
1978	2.7	2.4	2.2	4.3
1979	2.5	2.4	1.9	4.1
1980	2.2	2.3	1.7	3.3

Thus, the Japanese situation appears more like Western countries where women usually have higher unemployment rates than men.

The reason for the wide male-female differential for Japan after the adjustment is made is that women account for the great majority of jobseekers classified as not in the labor force, while men account for most of the reported unemployed who did not actively seek work in the month of the survey.

Why is Japanese unemployment low?

Japanese unemployment rates are very low whether U.S. or Japanese concepts are used. The low Japanese jobless rates reflect, in part, the fundamental differences between the Japanese economic system and culture and those of the industrialized Western nations. Difference in labor force mix are also significant.

Lifetime employment system. Under Japan's "lifetime employment system," regular, full-time workers (mostly men) are shielded from unemployment. During periods of economic difficulties, companies refrain as much as possible from laying off or dismissing their regular workers. For example, during the 1974–75 recession and the slow-growth years of the 1980's, hundreds of thousands of unneeded workers were kept on company payrolls, with subsidies provided by the government. These workers were often moved into jobs in different plants within the same firm or even lent to other firms.[16]

Japanese corporations, labor, and the government cooperate to an unusual degree. This cooperation is partly attributable to the broad social role assumed by Japanese corporations which provide a wide range of social services, including housing or financial help with mortgage payments, recreational facilities, and even wedding halls in which employees are married. Labor often accedes to wage and other concessions during economic difficulties. In this social context, the Japanese responses to recession can be understood.

Table 5. Expanded unemployment measures for the United States and Japan, 1980

[Numbers in thousands]

Category	United States (1980)	Japan (March 1980)
Unemployed		
Total, U.S. standard definition	7,637	1,240
Full-time jobseekers	6,269	[1]740
Part-time jobseekers	1,369	[1]500
Half	685	250
Part-time for economic reasons	4,321	1,920
Reduced hours	4,321	[2]1,790
Half	2,161	900
Zero hours	([3])	[4]130
U–6 numerator[5]	9,115	2,020
Plus discouraged workers	994	1,100
U–7 numerator	10,109	3,120
Civilian labor force		
Total, U.S. standard definition	106,940	54,560
Full-time labor force	91,296	46,740
Part-time labor force	15,644	7,820
Half	7,822	3,910
U–6 denominator[6]	99,118	50,650
U–7 denominator[7]	100,112	51,750
Unemployment rates (percent)		
U–5. U.S. standard definition	7.1	2.3
U–6. Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part-time for economic reasons[8] as a percent of the civilian labor force less ½ of the part-time labor force	9.2	4.0
U–7. U–6 plus discouraged workers in numerator and denominator	10.1	6.0

[1] Breakdown into full-time and part-time jobseekers partially estimated.

[2] Includes reported number of persons usually working part time who want more work (1,530,000) plus estimated number of persons usually working full-time who were on reduced (but not zero) hours (260,000).

[3] Included in U.S. standard definition.

[4] Not reported in March 1980 survey. Figure shown is estimated based on March 1979 proportion.

[5] All full-time jobseekers plus one-half part-time jobseekers plus one-half on reduced hours for economic reasons plus all on zero hours for economic reasons.

[6] Civilian labor force less one-half the part-time labor force.

[7] U–6 denominator plus discouraged workers.

[8] Japanese workers on "zero hours" are given full weight.

Nonregular workers. But what happens to employees who are not regular workers? There is a large segment of part-time, temporary, and seasonal workers—mostly women and "retired" older workers—who tend to bear the brunt of downturns because they do not come under "lifetime employment." These workers provide a degree of flexibility for Japanese firms, allowing them to accord more permanent status to their regular employees. As Taira points out, these "nonregular" workers tend to bypass unemployment status, moving from employment to "not in the labor force" when the economy slackens, and then back to employment when the economy improves. While they are out of the labor force, they are usually supported by their families. However, many do show up as unemployed—the jobseekers not in the labor force in the more probing March survey.

There is indirect evidence of this "hidden" type of employment in Japan's labor force data. For example, participation rates for women fell off sharply in 1974–75, but their unemployment rates rose only slightly. In the more recent slow growth period, however, female participation stabilized and even moved upward, as women joined the labor force to supplement family income (among other reasons).[17] This was more in line with the U.S. situation, where women continue to flow into the labor market during recessions.

Labor force mix. Besides the social and cultural factors, other elements in Japan promote low unemployment rates *vis-a-vis* the United States. For instance, the higher proportion of workers in the agricultural sector in Japan means that a larger segment of the Japanese labor force is practically immune to unemployment. Agricultural workers may be underemployed but they are not as subject to unemployment as are industrial workers because they usually spend some hours at work each week. Also, the higher share of self-employed and unpaid family workers in the Japanese labor force has a similar effect. Furthermore, the share of youth in the labor force is much smaller in Japan than in the United States. (In all developed countries, including Japan, youth under the age of 25 have higher unemployment rates than adults.) Moreover, young workers in the United States tend to change jobs much more often than their Japanese counterparts, further increasing the unemployment differential between the two countries.

An expanded unemployment concept

International comparisons of conventionally defined unemployment rates should be understood for what they measure—they compare the proportion of the labor force in each country which is without work, available for work, and actively seeking work. As such, they measure an important part of labor market health. But they do not show the entire picture.

Is the efficiency of the Japanese labor market really 3 to 5 times better than that of the Western nations? A strict comparison of unemployment rates would arrive at that misleading conclusion. However, we have noted that a substantial part of Japan's labor underutilization falls into the realm of underemployment (workers on reduced hours, "temporary layoffs") and discouragement, or labor force withdrawal. These forms of labor slack do not show up in the conventional unemployment rate.

A useful international comparison to supplement comparisons of conventionally defined unemployment could be made if the unemployment concept were expanded to encompass these other types of labor underutilization. In the United States, such measures exist within the unemployment measures designated U-1 to U-7.[18] These monthly measures include the official unemployment rate U-5. While U-1 to U-4 represent narrower measures of unemployment, U-6 and U-7 represent expanded concepts. U-6 incorporates persons on part-time schedules for economic reasons and U-7 brings in discouraged workers as well.

Table 5 shows a comparison of U-6 and U-7 for the United States and Japan. Data from the March 1980 special survey are used for Japan; annual 1980 data are shown for the United States. The Japanese figures should be viewed as only approximate indicators of U-6 and U-7 because they are partly estimated. One problem is that the March survey does not give a comprehensive count of persons on part time for economic reasons. The survey reports that of all persons usually working fewer than 35 hours, 1.53 million wished to work more hours. This is a good indicator of the number of persons on part time for economic reasons who usually work part time. However, the number of persons usually working full time who were on part time for economic reasons is not fully available. The number on "zero hours," or with no work at all during the week is reported in the March 1977 through 1979 surveys, but not in the March 1980 survey. We can estimate the March 1980 figure at 130,000, based on the March 1979 proportion. There must be a considerable number of other normally full-time workers on reduced hours, but they are not enumerated in the survey. For purposes of this comparison, we have doubled the number on "zero hours," to 260,000 persons.[19]

In the March 1980 survey, respondents not in the labor force who desired work and were available, but who did not look for work during the month, were asked why they were not seeking jobs now. Those responding "not likely to find work" are close to the U.S. concept of discouraged workers. Also within this concept are the "inactive jobseekers" who were excluded from the Japanese unemployed under U.S. concepts. This group has been added to U-7.

A comparison of the U-6 and U-7 rates in relation to the conventionally defined rates shows that the Japanese "expanded concept" rates are increased to a greater degree than the U.S. U-6 and U-7 rates. In other words, there is a convergence in the "unemployment rates" for the two countries when the definition is broadened. Under the conventional definition, the U.S. rate is triple the Japanese rate. Expanding the concept to U-6, the U.S. rate is around 2.3 times the Japanese rate. Defining unemployment even more broadly to encompass discouraged workers (U-7), the U.S. rate falls to 1.7 times the Japanese rate similarly defined.

Miracle or artifact?

The answer to Taira's question—is Japan's low unemployment an economic miracle or a statistical artifact?—is that it is neither. Although the Japanese definition of unemployment is somewhat more restrictive than the U.S. definition, the regular monthly survey gives a close approximation of the rate of unemployment under U.S. concepts. Since the monthly survey understates some groups and overstates others, the differences tend to cancel out, with a slight upward adjustment remaining. However, the Japanese labor force survey is misleading when it comes to

measuring women's unemployment. Based on the March surveys, there is a wide differential between men's and women's unemployment which is not apparent from the regular monthly survey. But Japanese unemployment rates are still extremely low by Western standards, both for men and for women.

Then, are these low Japanese rates an economic miracle? The answer here is also "no." Jobless rates must be understood for what they are—only partial measures of total labor slack. Expanding the unemployment concept to include other elements of labor slack—economic part-time and discouraged workers—draws the Japanese rate closer to U.S. levels. The explanations for the remaining differential lie in such differences as the composition of the labor force, levels of frictional unemployment, and economic growth rates. ☐

FOOTNOTES

[1] Koji Taira, "Japan's low unemployment: economic miracle or statistical artifact?" *Monthly Labor Review*, July 1983, pp. 3-10. See also Henry Scott Stokes, "Jobless Rate Reaches a High for Japan," *New York Times*, March 9, 1983, p. D-9; Jon Woronoff, "There is Unemployment in Japan," *The Oriental Economist*, November 1981, pp. 40-43. See also Woronoff's book *Japan's Wasted Workers* (Totowa, N.J., Allenheld, Osmun and Co., 1983).

[2] For example, see Joyanna Moy, "Recent labor market developments in the U.S. and 9 other countries," *Monthly Labor Review*, January 1984, pp. 44-51.

[3] *International Comparisons of Unemployment*, Bulletin 1979 (Bureau of Labor Statistics, 1978), pp. 80-85.

[4] *International Comparisons of Unemployment*, p. 85.

[5] In the Japanese survey definition of "family workers," the term "unpaid" was dropped in 1981. Now "family workers" are defined as "persons who work in an unincorporated enterprise operated by a member of the family." Because of Japanese tax laws which allow a family business or farm more favorable tax treatment if they report wages or salaries of family workers, most are reported as "paid" for tax purposes. However, Japanese statisticians believe that there is no significant difference between paid and unpaid family workers and no such distinction is made in the survey statistics. The tax deductions do not necessarily mean that compensation was in fact paid.

[6] See Robert L. Stein, "New Definitions for Employment and Unemployment," *Employment and Earnings*, February 1967, pp. 3-13.

[7] Based on a communication with the U.S. Embassy in Tokyo, February 1979.

[8] *Youth Unemployment: An International Perspective*, Bulletin 2098 (Bureau of Labor Statistics, September 1981), p. 24.

[9] Employment Status Surveys are conducted every 2 or 3 years in October, but they are not helpful here in that they show "usual status" rather than "actual status" and they obtain no information on persons without a job and desiring work.

[10] Based on consultations with Japanese statisticians, the analysis of the U.S. Embassy in Tokyo concluded that the whole series of questions noted as items "a" through "d" in the text, suffers from some ambiguity with respect to the words "wish" and "intend." "Intent" is perceived within the overall context of a wish. Thus, if conditions consistent with a person's wish arise (as to time, place, type of employment, and so forth), he or she could respond "I intend to take up a job immediately if I can find the appropriate job, since I don't see anything consistent with my wish. I am now not seeking a job in spite of my intention."

[11] There is no direct question on waiting to begin a new job in 30 days in the U.S. survey. This information must be volunteered by the respondent, which could result in some undercount of the number of persons in this category. Canada instituted a question on this point in 1976 and found the number of persons reporting that they were waiting to start a new job increased to about 5 percent of the unemployed, from around 2 percent previously.

[12] Japanese Ministry of Labour, *Yearbook of Labour Statistics*, 1977 through 1980 editions.

[13] In an earlier article, BLS described in detail the international differences in the treatment of layoffs. See Joyanna Moy and Constance Sorrentino, "Unemployment, labor force trends, and layoff practices in 10 countries," *Monthly Labor Review*, December 1981, pp. 8-11.

[14] International Labour Organization, Thirteenth International Conference of Labour Statisticians, *Report of the Conference*, Geneva, 18-29 October 1982.

[15] In a recent article, Eiji Shiraishi of the Japanese Ministry of Labor analyzed Japanese unemployment rates on a U.S. concepts basis, using the special March surveys of 1978 and 1980. He adjusted Japanese unemployment rates to U.S. concepts, arriving at 3.1 percent in March 1978 and 2.4 percent in March 1980. Both of these figures were just 0.1 percentage point above the figures obtained in the foregoing BLS analysis. Like BLS, Shiraishi did not make an adjustment for layoffs because "there is no such practice in Japan." He also was in accord with the BLS exclusion of new school graduates from the adjustment for persons waiting to begin a new job. See Eiji Shiraishi, "International Comparison of Unemployment Concepts," *Monthly Labour Statistics and Research Bulletin*, March 1982, pp. 13-20. (English translation available from BLS).

[16] For examples of Japanese employment practices see Haruo Shimada, *The Japanese Employment System*, Japanese Industrial Relations Series 6 (Tokyo, the Japan Institute of Labour, 1980); T. Shirai and others, *Contemporary Industrial Relations In Japan*, Japanese Industrial Relations Series 7 (Tokyo, the Japan Institute of Labour, 1980); Fujio John Tanaka, "Lifetime Employment in Japan," *Challenge*, July-August 1981; and Don Oberdorfer, "Japanese Soft Touch on Layoffs," *The Washington Post*, March 9, 1975, p. G-1.

[17] See Constance Sorrentino, "International comparisons of labor force participation," *Monthly Labor Review*, February 1983, pp. 27-28.

[18] See Julius Shiskin, "Employment and unemployment: the doughnut or the hole," *Monthly Labor Review*, February 1976, pp. 3-10.

[19] This is somewhat higher than a comparable ratio for the United States. Using the 1980 U.S. ratio of persons on layoff to persons who usually work full time but who are on reduced hours, the Japanese figure would be estimated as 160,000 rather than the 260,000 used here. The Japanese figure has been increased because hours reductions for economic reasons are used more frequently in Japan than in the United States, where workers are more likely to be laid off.

Senator **Proxmire**. One other question. At the bottom of table 1 in the January CPI release is a section which breaks the inflation rate down into commodities and services. It shows that commodity prices which make up 46 percent of the CPI fell 1.3 percent in the year whsile the prices of services rose 4.3 percent.

How do you account for the much higher inflation rate in services than in commodities and do the January figures suggest any changes from the pattern of the past year?

Mrs. **Norwood**. We have been seeing for some time higher rates of inflation in services than we have seen in commodities. That is, in part, perhaps because of the competition in commodities from abroad. It's also in part due to the kinds of services that we have.

We all know that health care services have not decelerated very much, and some of the services that are energy related or are classified as services in the housing component, for example, have also had fairly significant rates of inflation over the years. That's not a surprise. It's consistent I think with the data that we've been reporting for many months.

Senator **Proxmire**. Thank you very much.

Senator **Sarbanes** [presiding]. Congressman McMillan.

Representative **McMillan**. Mrs. Norwood, pursuing a line of questioning the Senator was on there with respect to real growth rates in the economy and the growth in employment, could you give us some comparative figures that would indicate the rate of growth in the work force that the economy has to sustain in order to stay even?

Mrs. **Norwood**. Well, we have had over the last year an increase of 2.2 million workers coming into the labor force. In the last month alone, in February we had 315,000 and in January we had 448,000. But more than 2 million a year is a sizable number to find jobs for.

It is quite clear that because of population growth alone, and the increased labor force participation rates of some groups of the population, we have to keep running just to stand still. The economy must create jobs just to keep the unemployment rate where it is, and I think that that makes the job or reducing unemployment much more difficult, but it's something we have to face.

Representative **McMillan**. Is that a figure that is somewhat predictable in terms of examining prior rates of increase in the work force so that as a guide to decisions that the Congress needs to address we can relate anticipated increases in the work force to what is desirable and hopefully sustainable in terms of real expansion in the economy?

Mrs. **Norwood**. Yes, it is quite predictable. There are data available on birth rates going back some years, and the Bureau of Labor Statistics does have a program of projections for the future of the labor force that looks at industry and occupation. We do that about every other year. We have projections now to 1995. By fall we will be issuing a new set of projections to the year 2000.

Representative **McMillan**. It seems to me that one of the real challenging things we are dealing with is not just the expansion in the population of the country, which is perhaps, what, on the order of 1 percent?

Mrs. **Norwood**. I'm not sure.

Representative McMILLAN. Somewhere in that range, but we are dealing with sociological changes that have been going on in this country for a long period of time that have to do with working spouses that all contribute to family income that it seems puts us in a very difficult challenging situation in terms of meeting those needs, and I think some of the figures in terms of the percent of the working force participating are a result of those sociological changes.

Mrs. NORWOOD. That's quite true. We have seen in the 1960's and 1970's an enormous increase in married women in particular coming into the work force and in women staying in the work force even after they reach the childbearing years.

We believe that that rate of increase for women will slow down a bit, but that some increase is going to continue. We are seeing increases in the labor force entry of some of our minority groups. Particularly over the last year the change in the Hispanic group has been considerable. We have no idea, of course, what the effects of the new immigration legislation will be on that. The black minority has also had some considerable increase in its labor force. It's increasing at about twice the rate of the whites.

So I think there are a lot of factors suggesting that people will continue to come into the labor market.

On the other hand, we should recognize that some of those rates have slowed down in the 1980's. The number of young people, for example, because of a slowdown in birth rates earlier, has been sharply reduced in the 1980's. So we have both upward pressure on unemployment and some downward pull on unemployment.

Representative McMILLAN. One final question. We were talking about productivity and you indicated there is evidence of improving productivity on the manufacturing sector.

It's always been extremely difficult for me to comprehend the manner in which we measure productivity in the service sector since so many aspects of the service sector have to do with delivering intangibles or delivering tangibles in which the cost of their production is only a fraction of the intangible or tangible product that they are delivering.

Would you comment upon, let's say the degree to which aggregate productivity may be somewhat modified by the growth of the service sector and the difficulty in measuring productivity under those conditions?

Mrs. NORWOOD. The measurement of productivity is a calculation that requires the measurement of output first and then some other things as well.

In defining the output of a service industry, there can be very real difficulties. In all of the statistical agencies of the Government we have work going on in trying to develop new and better measures and expanded measures in the service producing area.

There have been a number of people in academia who have also been working on this and there are some international groups which are trying to look at how to classify services and how to define them. I believe that a great deal more needs to be done in that area, particularly if we look at this industry by industry.

When we get to the broad general sectors of the economy, we must rely on the data that are used in the gross national product accounts, and there are improvements I believe that are needed in those measurements, but their measurements are reasonably consistent with what has happened in the past. We can at least get some information on trends. We do have work underway in our productivity office and in our price office, in particular, to look at some of these conceptual questions.

Representative McMILLAN. I guess another question would be how would you measure the productivity of lawyers in terms of liability lawsuits, for example?

Mrs. NORWOOD. With great difficulty.

Representative McMILLAN. Thank you very much, Mr. Chairman.

Senator SARBANES. Thank you very much.

We are very pleased to welcome Congressman Solarz to the committee. He is a very able and effective Member of the House, and I know he is going to bring great strength to the work of the Joint Economic Committee. He was recently placed on the committee by the House leadership. Steve, we are pleased to have you here.

Representative SOLARZ. Thank you very much, Mr. Chairman. I'm very much looking forward to serving on the committee and particularly to working with you. I can't think of anybody under whom I would rather serve my inaugural term as a member of the committee than you.

Let me say, Mrs. Norwood, for years I heard you on the radio driving into work each month and I never quite knew if you existed or not. So it's a delight to find out that, yes, Virginia, there is a Dr. Norwood. [Laughter.]

I have a number of questions. First, how many new jobs do we in fact have to create a year just to stay even in terms of not increasing the unemployment rate?

Mrs. NORWOOD. Well, over the past year we've had an increase on the labor force of a little more than 2.2 million, and then of course you always have some frictional exchange. So we certainly would have had to create several million jobs just to stand still.

Representative SOLARZ. But that's a rather imprecise figure. Are you saying essentially about 2 million jobs a year is what we have to generate just to avoid increases in the unemployment rate?

Mrs. NORWOOD. Well, last year the labor force increased by 2,242,000. So you would have had to have at least that number of jobs to give each of those people a job.

Representative SOLARZ. And do you expect that around 2 million new people will be coming into the labor force this year and each year for the next several years based on your demographic projections?

Mrs. NORWOOD. We anticipate that the rate of increase of the labor force is going to be somewhat slower or smaller than it had been in the 1970's because of young people, but that it will continue for the next several years somewhere around this figure, yes.

Representative SOLARZ. Do you have a working or operative definition of what would constitute a full-employment economy in terms of what the unemployment rate would have to be?

Mrs. NORWOOD. No, sir, we do not. We leave that to people who can make value judgments about the tradeoffs between unemployment and inflation, which is really what is involved.

Representative SOLARZ. Is there a consensus among economists these days as to what figures would be the functional equivalent of full employment?

Mrs. NORWOOD. I don't think there is a consensus. I think there is agreement that whatever that figure is, it's a little bit higher than people have thought of it in the past to be.

Representative SOLARZ. Which was 3 percent?

Mrs. NORWOOD. When I first came into the Labor Department I remember going to a meeting at which there was great discussion about how could we let the unemployment rate go above 3 percent. I think most economists today recognize that it would be extraordinarily difficult to call that full employment, but how high up you go I think depends really on the particular judgments you make about the tradeoffs that would have to occur.

Representative SOLARZ. Right. Now I gather your figure for this month is 6.7 percent unemployment in the labor force?

Mrs. NORWOOD. That's correct, including the Armed Forces.

Representative SOLARZ. What would that figure be if you added to it people who are working part time because they can't find full-time work?

Mrs. NORWOOD. We do have in our release table A-5 which gives us a whole range of unemployment rates starting with the least restrictive definition and assuming that you only count someone unemployed if he or she has been unemployed 15 weeks or longer and going up to the most inclusive definition.

Representative SOLARZ. Which table is that. Mrs. Norwood?

Mrs. NORWOOD. That's A-5. The broadest definition includes all full-time jobseekers, half of the part-time ones and half of the part time for economic reasons plus discouraged workers.

Representative SOLARZ. What does it come to?

Mrs. NORWOOD. For the last quarter of 1986 it was 10.2 percent. Now if you exclude the discouraged workers and you just look at the part-timers of various types you get 9.2 percent. But you can see in that table a whole range beginning with 1.8 percent and going all the way up.

Representative SOLARZ. Do you have any estimate as to the number of jobs that will be filled by American citizens as a result of the implementation of the immigration legislation——

Mrs. NORWOOD. No, not at all.

Representative SOLARZ [continuing]. And the presumptive departure of people who are here illegally?

Mrs. NORWOOD. We have been struggling, as a matter of fact, to figure out how to develop the kind of information needed in reports required of the Secretary of Labor and Secretary of Agriculture. Some of that is going to be very difficult to produce, but we're working on it.

Representative SOLARZ. Now of the 6.7 percent who are unemployed, how many are long term, and a long-term unemployed is a person who has been unemployed for how many weeks?

Mrs. NORWOOD. Well, that is also a judgment. I consider those unemployed 27 weeks or more, which is really 6 months to be the long-term unemployed, and there are 1,123,000 of those.

Representative SOLARZ. And what percent is that of the total unemployed?

Mrs. NORWOOD. 14.1 percent among the total unemployed.

Representative SOLARZ. Among the total unemployed.

Mrs. NORWOOD. Yes.

Representative SOLARZ. So that would suggest that the great majority of unemployed are short-term unemployed?

Mrs. NORWOOD. Yes.

Representative SOLARZ. Will the great majority of those people in fact get new jobs rather than sink into the category of the long-term unemployed?

Mrs. NORWOOD. What we find is that if you look at the pool of people who are unemployed in our survey in 1 month and then you go into the next month, roughly half of those people remain unemployed in the 2d month. Although a quarter of them have found jobs and a quarter of them have left the labor force.

Representative SOLARZ. Now you said the long-term unemployed were 14 percent of the unemployed.

Mrs. NORWOOD. Yes.

Representative SOLARZ. But if you looked at just unemployment in terms of long-term unemployment, what percent of the labor force is long-term unemployed?

Mrs. NORWOOD. It's perhaps 1 or 1.5 percent.

Representative SOLARZ. Now how much significance would you attach to that? I mean obviously of course if a person is out of work for a few weeks or a month or two, particularly if they are living off their income, that's a great hardship and there are psychological consequences to it as well and emotional.

But if in fact 98.5 percent of the work force is either working or can expect work relatively soon, how serious a problem is that? Does it make sense, in other words, to kind of make a sharp distinction between long term unemployed and less than long term in terms of the significance of the unemployment rate?

Mrs. NORWOOD. If you are one of those people, it's very significant. I feel rather strongly that this is the kind of problem that we often have when people look at 8 million people who are unemployed and then often try to develop programs that will take care of this whole group. The whole group does not need help, but I can tell you that there are 1,123,000 people out there who have been jobless for 6 months or longer. They are disproportionately minority, they are people who generally have very little skill, they often have very little education, they tend to live in areas where there are very few jobs and they are the prime candidates I think for the kinds of literacy programs that the Department of Labor——

Representative SOLARZ. So you're saying that one of the things that would make sense for us to do is to try to focus not only attention but programmatic remedies on the long-term unemployed because that's a more serious component of the overall unemployment problem?

Mrs. NORWOOD. I think what I'm saying is that we should look at the disaggregated data and we should look at various groups of people who have particular problems, and to the extent that any programs are being developed, they ought to be based on the disaggregated data.

In this country we have a great deal of movement in our labor market. It's very dynamic and many people can help themselves. The data can help us focus on that.

Representative SOLARZ. Have you ever done any studies on the difference between the long-term and the short-term unemployed in terms of what distinguishes the two groups other than the fact that one is long-term unemployed and the other is not?

Mrs. NORWOOD. We've tried to look at the demographic composition and the geographic composition of them.

Mr. PLEWES. The last time we took a serious look at it was about 2 years ago in a publication format, and we have the demographic data that we can update that study at any point.

Representative SOLARZ. Could you get me a copy of the study you did 2 years ago?

Mr. PLEWES. Yes.

[The information referred to follows:]

[From the Monthly Labor Review, February 1984]

Recent recessions swell ranks of the long-term unemployed

During the past seven recessions, joblessness lasting more than half a year has far outpaced the overall increase in unemployment and in 1981–82 reached the highest level of the postwar era

PHILIP L. RONES

The recent recession in the United States produced the highest unemployment rates in more than 40 years. It also produced unusually long periods of unemployment for a workforce that is normally among the most dynamic in the world.

Millions of Americans move into and out of each labor force category (employed, unemployed, or not in the labor force) every month. Generally, about half of the people who are unemployed in one month are no longer unemployed the next, some finding jobs and others ending their job search for other reasons. These people are then replaced by newly unemployed persons. Short-term unemployment is quite normal in a dynamic economy and, within limits, is necessary for the normal functioning of the job search process.

During 1982, however, as in any recessionary year, fewer unemployed people could find jobs, and, consequently, more remained unemployed from one month to the next. As a result, the number of persons out of work 15 weeks or more rose sharply.

Data on long-term unemployment provide a valuable addition to the more frequently reported unemployment data. This article will briefly investigate long-term unemployment and identify those worker groups most affected by this problem. Particular emphasis will be placed on the most recent recession.[1]

While an assessment of the causes of lengthy unemployment is not the focus of this discussion, a few comments are appropriate. What is being examined here is largely a cyclical condition, that is, the sharp rise in long-duration unemployment brought about by the severe 1981–82 recession. It should be noted, however, that some long-term joblessness is structural in nature, a result of some basic problem in the functioning of labor markets unrelated to cyclical changes. For example, the persistently high unemployment rate and unemployment duration of some groups of racial and ethnic minorities are evidence of such structural unemployment.

It should be kept in mind, then, that in regard to long-term joblessness, both structural and cyclical forces may be at work simultaneously. Some cases are fairly obvious, such as joblessness among blacks. Some are not. For example, prior to the two recessions of the 1980's, the incidence of long-term unemployment among workers in the primary metals industries was quite low—half the national average. More recently, long-term unemployment among these workers has become among the worst of any worker group. While the timing corresponds to a cyclical downturn, considerable evidence indicates that the Nation's steel industry is suffering from some basic problems quite unrelated to cyclical declines in demand. Thus, when structural problems appear

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under the "cloak" of recession, unemployment problems will persist after economic recovery is well under way.

Unemployment duration and the unemployment level should not be viewed as completely separate entities. In fact, the unemployment level is really a function of two factors.[2] The "incidence" of unemployment refers to the number of people who begin a spell of joblessness. Assuming a constant duration, the number unemployed will decline if the incidence declines. Conversely, assuming a constant incidence (a steady flow into unemployment status), the number of jobless will rise as duration increases, that is, persons remain unemployed longer. Thus, the increase in the unemployment levels during the recent recession (or any recession) was due both to increasing duration and incidence.

The most widely used measures of unemployment duration are the mean and median duration of a spell of unemployment.[3] While these indicators generally rise with increases in the unemployment rate (with some difference in timing), they may hide increases in long-term unemployment during certain periods of the business cycle. For instance, early in a recession, when there is extensive job loss, the large number of *newly* unemployed may actually lower these measures. It is not until the number of newly unemployed begins to decline as a proportion of the total that average duration measures begin a sustained rise. Similarly, during recoveries, the number of newly unemployed may begin to decline first, putting upward pressure on the mean and median durations. Thus, the long-term unemployed need to be examined directly.

Duration is key to jobless rise

Table 1 compares the number of newly unemployed (less than 5 weeks) to total unemployment since 1979. The number of persons in the two long-duration categories is also shown. Clearly, the newly unemployed are insufficient to account for the dramatic rise in overall joblessness. Since 1979, the average increase in the newly unemployed never exceeded 13 percent in any year and had totaled 32 percent through 1982. During the same period, total joblessness rose by 74 percent and, at the extreme, unemployment of longer than half a year more than tripled.

A similar pattern occurs in every period of unemployment increases. During the last seven recessions (starting in the early 1950's), the total of unemployed persons rose, on average, 84 percent from its previous low to its recession high.[4] However, as table 2 shows, the number unemployed 15 weeks or more rose almost 3 times as fast and the number unemployed more than a half year rose more than 4 times as fast. It should be noted that the recovery from the 1980 recession was so weak (the unemployment rate only improved half a point) that the percentage increase in long-term joblessness in the subsequent (1981-82) recession was somewhat low by historical standards; the actual levels, however, were far higher than those in any previous postwar recession.

Similarly, as a recession comes to an end, long-term unemployment continues to increase. Employers first stop laying off new workers and then begin recalling those workers most recently laid off. This helps to reduce unemployment of short and medium duration. Those workers who had become unemployed early in the downturn often have the least skills and the least seniority, and it typically requires a sustained period of recovery for them to obtain employment.

Thus, there is generally a time lag between when the unemployment rate peaks and when the number of long-term unemployed peaks. The nature of that lag, however, has changed. The following shows the number of months the high in long-duration unemployment followed the peak unemployment rate in the business cycles since 1948:

Peak year	*Unemployed 15 weeks and over*	*Unemployed 27 weeks and over*
1949	1	1
1954	0	1
1958	1	2
1961	2	2
1971	1	8
1975	2	6
1980	5	6
1982	0	5

Through the early 1960's, the number of long-term unemployed peaked within 1 or 2 months of the unemployment rate peak. The recessions were followed by relatively rapid and strong recoveries; the unemployment rate declined at least a percentage point, but generally much more, within 6 months of its peak. The recessions since 1970, however, have generally been followed by slower recoveries. In 1971, for instance, the rate did not fall a full point from its peak for a year and a half. After the 1980 recession, the rate did not even fall by as much as a full point (it recovered only six-tenths of a point). These weak recoveries do not provide many job opportunities for people who have experienced considerable unemployment. Thus, the ranks of those jobless at least 15 weeks have not tended to decline sufficiently

Table 1. Total unemployed by selected duration, with percent change from previous year, 1979–82 annual averages

[Numbers in thousands]

Characteristic	1979		1980		1981		1982	
	Number	Percent change	Number	Percent change	Number	Percent change	Number	Percent change
Total	6,137	-1.0	7,637	24.4	8,273	8.3	10,678	29.1
Unemployed less than 5 weeks	2,950	3.0	3,295	11.7	3,449	4.7	3,883	12.6
Unemployed 15 to 26 weeks	706	7.9	1,052	49.0	1,122	6.7	1,708	52.2
Unemployed 27 weeks and over	535	17.4	820	53.3	1,162	41.7	1,776	52.8

fast to offset those who become unemployed just prior to the unemployment peak and who subsequently join the ranks of the long-term unemployed. Movement out of the very long-term unemployed (27 weeks and over) is very slow, and hence this group sometimes peaks more than 3 months after the 15-week-and-over group peaks.

Recovery speeds jobless decline after lag

The 1983 recovery was somewhat different than those that preceded it. While the fall in the jobless rate was fairly slow for the first half year, long-term joblessness continued to rise until June. This pattern was similar to the three previous recoveries. In the second half, however, the recovery gained momentum, and by December the 12-month unemployment decline was faster than any previous recovery since the 1960–61 recession. Very long-term joblessness also declined rapidly in the second half to 2.1 million at yearend, compared with a peak of 2.9 million.

The extent of long-duration unemployment during the most recent recession is demonstrated here by comparing data for June 1983 with June 1979. Even though the recession bottomed in November 1982 (according to the National Bureau of Economic Research) and unemployment began to decline in January 1983, the June data are used because they represent the peak of unemployment of 27 or more weeks' duration. June 1979 is used for comparison because it is near the low point in unemployment between the 1975 and 1980 recessions. Because data for specific worker groups are not seasonally adjusted, the same month in any 2 years being compared should be used. This is particularly important in analyzing long-duration unemployment, which has a strong seasonal component. A date between the 1980 and 1982 recessions was not chosen because the recovery from the former recession was so weak, particularly in regard to long-term joblessness, that it could hardly be used as a comparison between relatively good and bad times. In fact, long-term joblessness in mid-1979 was half of what it was at its lowest point in 1981.

No single statistic adequately reflects the extent of long-term unemployment experienced by different labor force groups. For this reason, three types of measures are used which address different aspects of the problem.

1. The long-term unemployed as a proportion of a group's total unemployed answers the question, "If a person was unemployed, what was his or her likelihood of having been jobless at least 15 (or 27) weeks?"
2. The long-term unemployed as a proportion of a group's labor force combines two factors—the likelihood of being unemployed and the likelihood of the unemployment reaching long term. A group could have a high proportion of long-term unemployed under measure 1 (above) but have a low unemployment rate. (See, for example, persons age 55 and over in column 4, table 3.)
3. The percent distribution of the long-term unemployed provides the demographic and industry make-up of this group but is as much a function of the size of the labor force and the unemployment rate of a group as it is a function of the probability of becoming unemployed 15 weeks or more.

Demographic characteristics

In "good times," the long-duration unemployed are composed disproportionately of black workers and workers under 25 years of age, reflecting these groups' high unemployment rates. As a share of the unemployed, the long-term jobless are more likely to be male and over 25 years of age. As the economy worsens, some of these relationships intensify and others moderate. The complexity of these relationships is illustrated by focusing on men.

Once unemployed, men have a higher probability of staying unemployed at least 15 weeks, particularly those of prime working age and older. (See table 3.) This is due to several factors, including their greater likelihood (except for those in the oldest age groups) to be persistent in their job search. The lower duration of unemployment among young workers and women is not a result of their more successful job search. Rather, it is due to their greater tendency to end a period of job search by withdrawing from the job market. For instance, in 1979, 27 percent of women age 25 to 54 who were unemployed in 1 month had left the labor force the next. A comparable figure for persons age 16 to 24 was 25 percent. However, only 11 percent of men 25 to 54 left the labor force from unemployment in any given month. (For 1982, comparable percentages were 22 for women, 23 for youth, and 8 for men.)

For older unemployed persons, the high probability of long-term unemployment reflects the particularly low chance of finding a job for those who do persist in their job search. An unemployed man age 25 to 54 had a 50-percent better chance of finding a job in 1979 than did one age 55 and over. Even when many prime-working age men were out of work during the 1981–82 recession, they still stood a 25-percent better chance of finding a job in 1982 than their older counterparts.

Table 2. Percent change in unemployment[1] between recession peak and previous low, 1954 to 1982

(In percent)

Peak year	Total unemployed	Unemployed 15 weeks or longer	Unemployed 27 weeks or longer
Average, 7 recessions	84	246	394
1954	146	505	846
1958	102	297	471
1961	50	130	150
1971	92	266	466
1975	154	299	482
1980	43	117	149
1982	53	119	174

[1] Based on seasonally adjusted data.

The situation for blacks is somewhat different. The problem of long-duration unemployment for blacks is a result of their higher probability of becoming unemployed in the first place. Because the likelihood of reaching 15 (or 27) weeks of unemployment, once jobless, is roughly the same for blacks and whites (columns 5 and 6, table 3), the labor force differences (columns 7 and 8) are proportionate to the white/black differences in their unemployment rates. In both 1979 and 1982, blacks were from 2 to 3 times as likely to be long-term jobless as were whites, roughly the same as the relationship for overall unemployment.

Variations by industry

The statistics by industry show the effects of the recession most dramatically. In 1979, there was little difference among industries in the probability of a worker becoming unemployed for a long time. This probability was generally between 1 and 2 percent for 15 weeks or more and about 0.5 percent for 27 weeks and over. By 1983, there were dramatic differences in the long-term unemployment situation among the major industry groups. Finance and services continued to experience relatively low levels of long-term joblessness, although the levels were triple those in 1979. But some of the changes in other industry statistics were striking, most notably the cyclically sensitive construction and durable goods industries.

While about 4 percent of the civilian labor force was unemployed at least 15 weeks in June 1983, more than 7 percent of the construction and durable goods labor force had reached that level. And while the average worker was 5 times as likely to have been unemployed more than 6 months in June 1983 compared to 4 years earlier, workers in construction were 8 times as likely and those in durable goods, 9 times. In primary metals (largely steel), a worker was nearly 20 times as likely to be jobless for 15 (or 27) weeks as 4 years earlier. Nearly three-fourths of all jobless workers in this industry had been jobless at least 15 weeks and 6 of 10 were jobless more than one half year. These figures demonstrate the combined effects of both cyclical and structural problems in the employment situation in steel. It should also be noted that auto manufacturing experienced a marked improvement in its unemployment situation during the first half of 1983. The long-term duration figures shown for June 1983, as bad as they are, actually represent a 50-percent improvement over February, the industry's worst month. These developments make it clearer why prime working age men (25–54 year-olds) were hardest hit by long-term unemployment. These men accounted for half of the wage and salary employment in durable goods and construction in 1979, compared with only one-third of wage and salary employment in the service-producing sector.

A job loser was far more likely to remain unemployed for long periods than was a job leaver or a labor force entrant. This makes sense, given the voluntary nature of a quit and the more marginal job market commitment of entrants as a group. Moreover, job losers are likely to have come from the cyclically sensitive goods-producing sector. Between June of 1979 and 1983, job losers had risen from one-half to almost three-fourths of the long-term jobless.

Work experience data

The duration measures discussed thus far come from the responses to the monthly Current Population Survey questionnaire. Another measure of unemployment duration ob-

Table 3. The long-term unemployed by selected characteristics, June 1979 and June 1983, not seasonally adjusted

[Numbers in thousands]

Characteristic	Total unemployed		Unemployed 15 weeks or longer								Unemployed 27 weeks or longer							
	June 1979	June 1983	Total		Percent of unemployed		Percent of labor force		Percent distribution		Total		Percent of unemployed		Percent of labor force		Percent distribution	
			June 1979	June 1983	June 1979	June 1983	June 1979	June 1983	June 1979	June 1983	June 1979	June 1983	June 1979	June 1983	June 1979	June 1983	June 1979	June 1983
Total	6 235	11 570	1 085	4 447	17.4	38.4	1.0	3.9	100.0	100.0	492	2 842	7.9	24.6	.5	2.5	100.0	100.0
Men	2 993	6 498	601	2 939	20.1	45.2	.9	4.6	55.4	66.1	268	1 934	9.0	29.8	.5	3.1	54.5	68.1
Women	3 242	5 072	484	1 507	14.9	29.7	1.1	3.1	44.6	33.9	224	908	6.9	17.9	.5	1.9	45.5	31.9
16 to 19 years	2 034	2 527	136	313	6.7	12.4	1.2	2.2	12.5	7.0	44	148	2.2	5.9	.4	1.6	8.9	5.2
20 to 24 years	1 441	2 478	233	814	16.2	32.8	1.5	4.9	21.5	18.3	91	458	6.3	18.5	.6	2.8	18.5	16.1
25 to 54 years	2 372	5 780	589	2 885	24.8	50.0	.9	4.0	54.3	64.9	284	1 939	12.0	33.5	.4	2.7	57.7	68.2
55 years and over	389	785	128	431	32.9	54.9	.9	2.9	11.8	9.7	73	299	18.8	38.1	.5	2.0	14.8	10.5
White	4 677	8 598	790	3 317	16.9	38.6	.9	3.4	72.8	74.6	329	2 104	7.0	24.5	.4	2.1	66.9	74.0
Black	1 421	2 599	273	997	19.2	38.4	2.6	8.3	25.2	22.4	119	657	8.4	25.3	1.1	5.5	24.2	23.1
Hispanic origin	432	896	70	240	16.2	26.8	1.4	3.8	6.5	5.4	26	155	6.0	17.3	.5	3.0	5.3	5.5
Construction	456	919	97	438	21.3	47.7	1.6	7.0	8.9	9.8	32	262	7.0	28.5	.5	4.2	6.5	9.2
Manufacturing	1 158	2 500	304	1 429	26.3	57.2	1.3	6.4	28.0	32.1	129	1 006	11.1	40.2	.6	4.5	26.2	35.4
Durable goods	611	1 602	182	993	29.8	62.0	1.3	7.5	16.8	22.3	84	703	13.7	43.9	.6	5.3	17.1	24.7
Primary metals	32	195	10	142	31.3	72.8	.8	14.0	.9	3.2	7	115	21.9	59.0	.5	11.4	1.4	4.0
Autos	54	137	18	91	33.3	66.4	1.3	8.4	1.7	2.0	7	73	13.0	53.3	.5	6.7	1.4	2.6
Nondurable goods	547	898	121	436	22.1	48.6	1.3	4.9	11.2	9.8	44	303	8.0	33.7	.5	3.4	8.9	10.7
Trade	1 354	2 243	195	816	15.0	36.4	1.0	3.8	18.0	18.3	[illegible]	449	5.4	20.0	.4	2.1	14.4	15.8
Finance	1 462	2 434	258	860	17.6	35.3	.8	2.4	23.8	19.3	134	542	9.2	22.3	.4	1.5	27.2	19.1
Job losers	2 098	6 135	577	3 314	27.5	54.0	—	—	53.2	74.5	265	2 173	12.6	35.4	—	—	53.9	76.5
Job leavers	823	748	143	231	17.4	30.9	—	—	13.2	5.2	61	143	7.4	19.1	—	—	12.4	5.0
Entrants	3 314	4 686	363	884	11.0	18.9	—	—	33.5	19.9	165	522	5.0	11.1	—	—	33.5	18.4

tainable from the CPS comes from responses from a set of supplemental questions asked each March regarding the respondent's work experience during the prior calendar year. Each measure has advantages and disadvantages. The duration measure from the monthly CPS relates to a single, continuous spell of unemployment, while the March supplement counts the total weeks of unemployment over the course of a year regardless of the number of spells. The March data, therefore, understate the duration of unemployment for spells that begin before, or continue after, a calendar year. The monthly survey, by contrast, provides more reliable estimates of unemployment primarily because it does not entail the problems of recall associated with work experience questions. However, the monthly CPS may also understate the duration of unemployment when it is broken by a brief period of employment or labor force withdrawal.[6]

While neither the monthly nor the annual work experience data on duration of joblessness are without limitations, when combined, they provide a fairly thorough view of the problem. For a cyclical perspective, the monthly survey is generally better. To assess the extent of the problem on an individual basis, the work experience questionnaire is quite helpful. In this case, unemployment duration for 1982 will be compared to 1979, a year of relatively low unemployment.

Data from the work experience tabulations demonstrate much the same demographic patterns as the monthly surveys. In 1982, being male and being black each added 10 percentage points to the proportion of those jobless 15 weeks or more in each group. (See table 4.) In other words, the proportion of black women and white men jobless this long was about 10 points higher than the lowest group, white women, while the proportion of black men was 20 points higher. Hispanic men and women experienced long-term joblessness in proportions between their white and black counterparts.

Half of all unemployed persons reported at least 15 weeks of unemployment in 1982. This figure is higher than the figure from the monthly CPS largely because it counts all spells of unemployment. The proportion unemployed 27 weeks or longer is severely limited by the time frame of the March supplement questionnaire—the half-year period had to fall entirely within the particular calendar year.

Table 4. Proportion of unemployed who experienced at least 15 weeks of unemployment during 1979 and 1982, by sex, race, and Hispanic origin

Characteristic	Duration of unemployment			
	15 weeks and over		27 weeks and over	
	1979	1982	1979	1982
Total	33.4	49.6	13.7	25.5
Men	35.9	54.1	14.9	27.8
White	33.8	52.6	13.3	26.0
Black	49.6	62.8	24.7	38.1
Hispanic origin	36.8	57.8	15.2	28.6
Women	30.5	43.2	12.3	22.6
White	28.2	41.3	11.1	21.5
Black	41.[illegible]	52.[illegible]	19.4	29.[illegible]
Hispanic origin	[illegible]	[illegible]	[illegible]	[illegible]

WHILE SHORT-TERM JOBLESSNESS is often part of the normal functioning of a market economy, long-term joblessness can have profound consequences for the individual and family—financial, emotional, and even physical. The 1981–82 recession resulted in levels of long-term unemployment far higher than any experienced since the Great Depression.

The hardest hit workers were men, who typically work in cyclically sensitive industries and who tend to persevere in their job search. Racial minorities, whose overall joblessness is extensive, experience a similarly large share of long-term unemployment.

Long-term unemployment is a critical policy area not only during recessions but also during expansions, when the focus shifts to the hard-core, or structurally, unemployed. This aspect of the unemployment picture receives less attention than the overall jobless rate or level but bears directly on the question of economic hardship. ☐

——FOOTNOTES——

[1] The source of data is the Current Population Survey, a monthly survey of about 60,000 households, conducted by the Bureau of the Census for the Bureau of Labor Statistics.

[2] The mathematical relationship between flow, duration, and the unemployment rate is discussed in Ronald S. Warren, Jr., "Measuring the flow and duration as jobless rate components," *Monthly Labor Review*, March 1977, pp. 71–72.

[3] For a discussion of the issues involved in measuring the duration of unemployment, see Norman Bowers, "Probing the issues of unemployment duration," *Monthly Labor Review*, July 1980, pp. 23–32.

[4] The 1949 recession is not included here because its data, dating to 1948, cannot be used to identify the "prerecession low."

[5] Data on the probability of labor force withdrawal and of finding a job come from the Current Population Survey gross flows data. Annual averages are used to improve the reliability of the estimates.

[6] In the monthly CPS, a period of 2 weeks or more during which a person is either employed or ceases job search is considered a break in a spell of unemployment.

Representative Solarz. Just a few more questions. Do you have any figures which would indicate what the poverty rate is or the percentage of the population below the poverty line in the United States compared to the other industrial democracies?

Mrs. Norwood. There is an official OMB approved definition of poverty and it's calculated by the Census Bureau. I'm not sure what there is available for other countries, but my guess would be that the definition would be quite different.

One of the problems that we have in discussing this whole issue of income adequacy in the labor market is the judgments that need to be made about what we're talking about. We have median income and you can divide income distributions into thirds and you can divide it into quarters and you can divide it into six pieces.

The question is really what does it all mean and where does that judgment about the level of poverty really apply? Is it the same in this country as in Spain, for example? I don't know, and that's very difficult to put together.

Representative Solarz. Do you have comparative figures on productivity rates on a sectorial basis in the United States in relation to the productivity rates in other industrial democracies?

Mrs. Norwood. We do have a program of comparison of major broad sectors of the economy of the rates of productivity change in this country and other countries, the major countries.

Representative Solarz. Could you make that available to me?

Mrs. Norwood. Surely.

Representative Solarz. I would appreciate it.

[The information referred to follows:]

OUTPUT PER HOUR IN MAUFACTURING
12 COUNTRIES, 1960-85
Average Annual Compound Rates of Change

Country	1960-85	1960-73	1973-85	1973-81	1982-85	1983	1984	1985
United States	2.7	3.2	2.2	1.3	4.7	5.8	4.1	4.4
Canada	3.4	4.7	1.9	1.6	4.4	6.4	3.7	3.2
Japan	8.0	10.3	5.6	5.5	5.8	5.4	7.0	5.0
Belgium	6.5	6.9	6.0	6.4	4.9	6.6	3.5	4.6
Denmark	4.8	6.4	3.0	4.0	1.3	2.1	1.0	.7
France	5.5	6.5	4.4	4.4	3.8	4.3	3.9	3.3
Germany	4.8	5.8	3.7	3.5	5.0	5.8	3.7	5.6
Italy	5.4	7.3	3.5	3.6	3.7	2.6	5.4	3.1
Netherlands	6.2	7.4	5.0	4.6	6.8	6.8	10.7	3.1
Norway	3.2	4.3	2.0	1.6	3.1	5.9	2.6	.9
Sweden	4.7	6.4	3.0	2.2	4.9	7.7	4.4	2.7
United Kingdom	3.5	4.3	2.7	1.5	5.1	7.3	4.5	3.4

SOURCE: Bureau of Labor Statistics

Representative **Solarz**. Now the unemployment rate among blacks is obviously considerably higher than among whites. What do you attribute that to?

Mrs. **Norwood**. There are a lot of reasons, some of which are rather difficult to pin down. It's quite clear that there is a geographic problem. Blacks tend to be concentrated in particular areas of the country and there may not be jobs in those areas.

I believe, by the way, that we are going to see in the future much more disparity from one geographic area to another than we have in the past, and I think that some of our black population will suffer from that.

We find that black women are working and have worked. Their labor force participation rates are somewhat higher than those for white women, although they have a higher unemployment rate, as well. I notice that this month the black women have a higher unemployment rate than the black men.

The black population is also more likely to be discouraged. They are disproportionately represented among the discouraged workers and that's because they have a harder time, perhaps because of discrimination, although we have laws which are supposed to prevent that.

Another factor may be the kinds of opportunities for education and advancement that they have. It's quite easy to get discouraged if you're living in a poverty situation.

We know that there are large numbers of black children who are living in single parent families and if you look at the women maintaining families, 1 in 3 of them are living in poverty. So I think it's a whole host of things, including education, training, the kind of economic circumstances in which they are living, and the areas in which they live.

Representative **Solarz**. Thank you very much, Mr. Chairman.

Senator **Sarbanes**. Thank you very much, Congressman Solarz.

Mrs. Norwood, I want to follow up on one line of questioning that Congressman Solarz was pursuing. I'm looking at two charts that you submitted with your testimony, chart 1, the unemployment rate of all civilian workers seasonally adjusted, and chart 7, the long-term unemployment seasonally adjusted in each instance from 1948 to 1987.

What strikes me is the long-term unemployed. You run two lines, 15 weeks and over and 27 weeks and over. It seems to be a worsening problem, in terms of its cyclical movement, if you compare it with the unemployment rate of all civilian workers. At least that's the first impression that I derive from these charts.

For instance, if you look at the unemployment rate of all civilian workers, the level now is below even the peaks of some earlier recessions, but if you look at the long-term unemployed, both the 15-week and the 27-week, that's not the case.

This seems to be a growing problem. In other words, at an earlier time here obviously long-term unemployment would go up when a recession occurred and unemployment generally went up, but it seemed to move back down again, if not in tandem, at least something approximating it. It's no longer doing that, apparently.

What is the explanation?

Mrs. NORWOOD. I think what is happening is that is is going down, but it had gone up to such extraordinary levels in recent years that it has not come down to low levels. As you can see, the peaks in the 1973-75 recession were very high and then of course in the 1981-82 recession it was even higher. But you're quite right, there is a difference.

Senator SARBANES. Now the long-term unemployed would be without unemployment insurance, would they not?

Mrs. NORWOOD. Yes, probably, although it depends on the extent of extended benefits, but yes, in general I think you're right.

Senator SARBANES. Do you have figures on the number of the unemployed who are drawing unemployment insurance?

Mrs. NORWOOD. Yes, we do. In the regular programs there were about 3 million in February.

Senator SARBANES. So what percent of the unemployed draw unemployment insurance?

Mrs. NORWOOD. Well, if you look at it as a proportion of total unemployment as we measure it in the current population survey, it's about 36.2 percent.

Senator SARBANES. 36.2.

Mrs. NORWOOD. Yes.

Senator SARBANES. My recollection is that not too long ago that figure was over half, or closer to 60 percent; is that correct?

Mrs. NORWOOD. Yes.

Senator SARBANES. Has the percentage of the unemployed drawing unemployment insurance dropped significantly over the last decade?

Mrs. NORWOOD. Over the last decade, yes, it has. It was 67.2 percent in 1975 and it dropped shortly thereafter.

Representative SOLARZ. If the gentleman will yield just for one question on this point. Why is it that approximately two-thirds of the unemployed are not getting unemployment compensation?

Mrs. NORWOOD. Partly because of the definitions. For example, we count as unemployed new entrants to the labor force and reentrants to the labor force as well as people who have lost a job and left a job.

If you took those claiming unemployment compensation as a proportion of the people who have lost their jobs and who would be most likely to have developed their eligibility, then the proportion is up to 68.9 percent.

Representative SOLARZ. Well even there that would indicate close to a third of the people who were presumptively eligible are not getting benefits.

Mrs. NORWOOD. That is correct.

Representatives SOLARZ. Why is that?

Mrs. NORWOOD. Well, there may be a variety of reasons, including, of course, the fact that they may have already have used up their eligibility.

Senator SARBANES. I now want to ask about how we relate the unemployment figures to other economic indicators. Over the last few days the papers have had one story after another that new orders for manufactured goods are down, retail sales are down, and the indicators are down.

What is your view on the correlation between those figures and the unemployment figure? Are those figures ahead of the unemployment figures? In other words, if there is a slowdown in economic activity, which those figures would seem to indicate, is the unemployment rate likely to catch up in the next month? Are the other indicators in a sense ahead of the cycle, or is your figure clearly a contrary signal, because coming as it does in a certain timeframe relative to those figures? The unemployment rate is not going down, it's staying stable, but these others are going down. To that degree it's a contrary indication.

Mrs. NORWOOD. The figures to look at in our data are the employment figures. They would relate more specifically, I think, to those you mention.

Our data are for February. The data that are out there on all these other economic issues are either for January or for the last quarter of the year. So some of them could be indicating a change that could be going on.

If you look at the specifics of our data, you find that in the goods producing sector things are either unchanged or somewhat down. Employment in the mining industry is doing poorly. It's had a negative employment pattern; small changes, but nevertheless for the last several months jobs have been down. It's lost 150,000 jobs over the year.

Manufacturing is not gaining employment. Manufacturing has however, gained hours in February and that's quite important. There could be several explanations for that. One is that factory hours are an important leading indicator, or they have been in the past, and this could mean that things are going to get much better in manufacturing.

On the other hand, it could well be that employers are finding it cheaper and somewhat more sensible to expand hours until they see whether in fact the durable orders and other data hold up. That is, they are being extraordinarily cautious before taking on a lot of new employees.

In retail trade we have had significant employment increases in the last 2 months, but before that there was not a large change, and it's quite clear that some of that at least is because we did not have as much hiring during the holiday season in the retail trade area as we had in recent years. So we may have a little bit of exaggeration of the seasonality in those numbers. And the retail trade data may look better than they actually are.

As Tom Plewes says, the weather has been unusually good. So we have had fairly good construction employment, but that may mean that we are borrowing from the springtime expansion and we may have moved some construction employment forward.

There has also been a great deal of discussion in the literature about the possible effects of the tax laws on the labor market and on the economy in general. It's quite clear that some big durable goods purchases occurred at the end of the year that would normally have occurred in the first couple of months of 1987. People bought cars, for example, and other big ticket items that would give them some sales tax deductions which they are not going to get now in 1987.

It's not all clear, however, that there was much of a shift otherwise. But there is a lot of discussion about it, and I don't know quite how to assess it.

Senator **Sarbanes**. Let me ask you about chart 1 again, the unemployment rate of all civilian workers seasonally adjusted, 1948 to 1987. It is clear from that that the trend line on the unemployment rate has been moving up. In other words, it gets higher with each recession, and very high in fact in 1982 when it went into double digits for the first time since before World War II. Then it comes back down, it doesn't get down anywhere near where it used to be.

We are now in the 5th year of a recovery. We had very rapid growth in 1984 but growth has been somewhat sluggish since. While we've had some growth, the rate is not far below what it was in the downturn and not in the recovery period.

I'm also interested in the fact that the unemployment rate seems to move up much more rapidly than it subsequently comes down. If you take the view, which I'm beginning to take, that the economy is to some extent moving on thin ice and there is cause for concern—for example, in terms of the overhang of debt and the trade figures—then even the CPI figure for 1 month, which is not something we ought to project trends from, is of some concern.

Is it accurate to say that the unemployment rate, once we go into a downturn, can move up very quickly?

Mrs. **Norwood**. Yes. I think we have had experience of that going all the way back to 1949 if you look at that chart. Any time when it does move up it rises steeply.

Senator **Sarbanes**. In 1975, I guess it was. Do you have the month-by-month figures for the recession of 1975?

Mrs. **Norwood**. Yes, I do. We need to start in 1973. It was in the 4 to 5 percent range and went up very rapidly to 8.6 percent and then to 9 percent really by May 1975. So it was about 4 percentage points.

Senator **Sarbanes**. And over what period of time?

Mrs. **Norwood**. We are just trying to look up the National Bureau of Economic Research's peak, but the peak of the series is a little bit different. November 1973 was the NBER peak, and the unemployment rate was 4.8 percent. It reached 9 percent in May 1975. That was a situation where it stayed fairly level for many months after the NBER had identified a peak and then took off very sharply.

Senator **Sarbanes**. My recollection is that it ran up very fast in about a 6-month period. Would that be correct?

Mrs. **Norwood**. That's right.

Senator **Sarbanes**. Now I take it in 1982 it was not quite as sharp, but was fairly sharp nonetheless. In fact in all of these recessions, even if you go back, you find a very sharp runup in the unemployment rate. Literally in a matter of months we can go from an unemployment rate that everyone regards with considerable satisfaction to one that is a matter of deep concern. Would that be an accurate statement?

Mrs. **Norwood**. Oh, yes, I think that is quite correct.

Senator **Sarbanes**. Well, my time is up. Congressman McMillan.

Representative McMillan. Thank you. Pursuing that just a little further, it strikes me that if you look back over the years, the 1950's forward, I think we all acknowledge that the domestic economy is under particular stress, particularly in the last say decade and it seems to be increasing because of a lack of competitiveness if you want to call it that in certain basic industries, and we can identify them. It seems to me that we are in a different ball game compared to earlier years in the post-World War II period.

Would you agree that that kind of challenge that we face is likely to produce a proportionately higher level of long-term unemployment in impacted industries, take steel, automobiles, textiles, furniture, and you could go on and on in which you have workers that have been in those industries most of their working lives and this is a major disruption in their work life in contrast to other industries where there may be a much higher degree of mobility.

I think it gets back to the suggestion you made earlier that the challenge we face is targeting our response to that, to those impacted areas of the economy rather than simply viewing it in a macro fashion in which we may not get to the underlying particular cause of the problem.

Is that a reasonable way of looking at this, do you think?

Mrs. Norwood. It depends, of course, on what the issues are that we are trying to address. When you look at particular groups of people who have difficulty in the labor market you want to look at what their characteristics are and what troubles they are finding. That I think, is very important and those groups are very different, one from another. The more macroeconomic problem also needs to be addressed.

We are experiencing now a tremendous restructuring by industry of our economy and that makes it a little bit difficult sometimes to compare what we are doing now with what happened before. History is not going to repeat itself in quite the same form.

For example, if you look at the change during the current recovery and compare it to the recovery that followed the recession in the 1970's, you find that we created nearly three times the number of jobs in manufacturing in the 1970's, after that recession, than we have in a similar number of months in the current recovery.

So that's a very real shift and I believe, it will result in, and has resulted in, some improvement in productivity rates in manufacturing because output generally has held up in manufacturing.

So there are some very real changes that are occurring. We also have a number of industries which even during the recovery, have been losing employment. Some of that is because of technological change that's occurring in those industries and some of it is for other reasons.

Representative McMillan. Well, I think it's rather astounding that we have been able to reduce the unemployment rate at a time that we know that there are severely impacted industries. It's occurred in my own district, for example, where we have a very low unemployment rate, one of the lowest in the country, and yet I can identify 10,000 textile jobs that we've lost in 5 years within that district, and my district is not as heavily impacted as some around it.

But then you go to Louisiana or go to Texas and look at the unemployment rates and it seems to me that the aggregate figures are perhaps masking secular problems and focus. Yes, we do have to deal with both, but we are going to be more successful if we are successful in isolating the particular problems and addressing them.

Mrs. **Norwood**. That's quite true. Specific industries have often been located in particular areas, with their feeder industries around them, which tends to intensify differences between areas. You have the high-technology area, and you need only look at the State of Texas where you've got one labor market in Houston and one around the Mexican border, and another one in Austin. There are very real differences going on all around this country.

Representative **McMillan**. Shifting gears just a little bit. One of the things we are going to be asked to take a look at will be an adjustment in the minimum wage.

Do we have reliable statistics going back over time as to the proportion of the work force that is being paid at the minimum wage level?

Mrs. **Norwood**. Yes, we do have data on that. We published an article recently in the Monthly Labor Review and we'll be glad to submit that information for the record.

Representative **McMillan**. I think that would be helpful.

[The article referred to follows:]

[From the Monthly Labor Review, February 1986]

Hourly paid workers: who they are and what they earn

More than half of all wage and salary workers were paid by the hour during 1984; median earnings were $5.95 per hour, but a closer look reveals many variations among groups

EARL F. MELLOR AND STEVEN E. HAUGEN

The Bureau of Labor Statistics publishes several different data series on the hourly earnings of workers, each highlighting different worker and job-related characteristics. All but one of these series are based on surveys of payroll and other records of business establishments. Data from these series contain considerable industrial detail. In contrast, the remaining earnings series is based on a nationwide sample survey of households, and provides detailed information on hourly earnings by the demographic and social characteristics of the wage earners.[1] (See the appendix on page 26.) Moreover, the earnings obtained in the Current Population Survey (CPS) of households represent *only* hourly wages paid to the employee—stripped of any effects of tips, premium pay for overtime, bonuses, and commissions. More than half of all wage and salary workers are in this category.

Who is paid by the hour

Altogether, 92 million American workers were paid wages or salaries in 1984, and 54 million of them were paid at hourly rates. The method of remuneration received by workers is closely linked to the nature of jobs held. For example, 80 percent of all part-time workers were paid by the hour, compared with 54 percent of the full-time workers. The fact that women were more likely than men to work part time is reflected in the larger proportion of women who were paid by the hour—62 percent versus 56 percent (table 1).

The same explanation applies to younger versus older workers. The proportion paid hourly rates was highest for teenagers—89 percent—and lowest for those in the central prime age groups, comprising the 35 to 49 population. Even for those aged 70 and over, the proportion was far below that for teenagers and young adults. The high proportion of young workers paid by the hour reflects their tendency to work both part time and part year, and in occupations less likely to be salaried even when they are employed all year in full-time jobs.

Earl F. Mellor and Steven E. Haugen are economists in the Division of Employment and Unemployment Analysis, Office of Employment and Unemployment Statistics, Bureau of Labor Statistics.

Table 1. Employed wage and salary workers paid hourly rates by selected characteristics, 1984 annual averages

[Numbers in thousands]

Characteristic	All wage and salary workers			Workers paid hourly rates					
	Total	Men	Women	Number			As a percent of all workers		
				Total	Men	Women	Total	Men	Women
Race and Hispanic origin									
Total, 16 years and over	92,194	50,022	42,172	54,143	28,140	26,003	58.7	56.3	61.7
White	80,071	43,932	36,139	46,098	24,084	22,014	57.6	54.8	60.9
Black	9,699	4,819	4,880	6,623	3,346	3,277	68.3	69.4	67.2
Hispanic origin	5,271	3,067	2,204	3,643	2,165	1,479	69.1	70.6	67.1
Age									
16 to 19 years	6,243	3,171	3,072	5,552	2,787	2,765	88.9	87.9	90.0
20 to 24 years	13,661	7,189	6,472	10,092	5,442	4,650	73.9	75.7	71.8
25 to 29 years	14,559	8,021	6,539	8,667	4,756	3,911	59.5	59.3	59.8
30 to 34 years	12,917	7,164	5,754	6,898	3,744	3,154	53.4	52.3	54.8
35 to 39 years	11,222	6,107	5,115	5,658	2,838	2,820	50.4	46.5	55.1
40 to 44 years	8,917	4,811	4,107	4,535	2,214	2,321	50.9	46.0	56.5
45 to 49 years	7,097	3,887	3,211	3,586	1,766	1,820	50.5	45.4	56.7
50 to 54 years	6,391	3,561	2,832	3,302	1,687	1,615	51.7	47.4	57.0
55 to 59 years	5,694	3,176	2,517	2,954	1,506	1,448	51.9	47.4	57.5
60 to 64 years	3,599	1,947	1,652	1,894	935	959	52.6	48.0	58.1
65 to 69 years	1,148	591	557	606	267	340	52.8	45.2	61.0
70 years and over	743	398	345	398	198	200	53.6	49.7	58.0
Hours usually worked									
Part-time workers	17,282	5,368	11,914	13,880	4,243	9,637	80.3	79.0	80.9
Full-time workers	74,912	44,654	30,258	40,262	23,896	16,366	53.7	53.5	54.1
35 to 39 hours	6,961	2,132	4,829	3,784	1,185	2,599	54.4	55.6	53.8
40 hours	52,307	30,426	21,882	31,238	18,571	12,667	59.7	61.0	57.9
41 to 44 hours	1,517	992	525	829	550	279	54.6	55.4	53.1
45 to 48 hours	5,327	3,972	1,355	2,195	1,721	475	41.2	43.3	35.1
49 to 59 hours	6,076	4,838	1,238	1,678	1,408	270	27.6	29.1	21.8
60 hours or more	2,723	2,294	429	537	461	76	19.7	20.1	17.7
Occupation									
Managerial and professional specialty	20,817	11,412	9,404	4,541	1,636	3,005	22.3	14.3	32.0
Executive, administrative, and managerial	9,314	5,879	3,434	1,670	755	914	17.9	12.8	26.6
Professional specialty	11,504	5,533	5,970	2,872	881	2,091	25.0	15.9	35.0
Technical, sales, and administrative support	28,135	8,689	19,446	16,373	4,157	12,217	58.2	42.9	62.8
Technicians and related support	3,088	1,578	1,510	1,763	765	998	57.1	48.5	66.1
Sales occupations	9,916	4,806	5,111	5,220	1,439	3,781	52.6	29.9	74.0
Administrative support, including clerical	16,130	3,305	12,825	9,390	1,952	7,438	58.2	59.1	58.0
Service occupations	13,066	5,249	7,817	9,899	3,804	6,095	75.8	72.5	78.0
Private household	1,008	38	970	511	25	486	50.7	(1)	50.1
Protective service	1,659	1,438	220	892	756	137	53.8	52.6	62.3
Service, except private household and protective	10,398	3,772	6,626	8,496	3,023	5,473	81.7	80.1	82.6
Precision production, craft, and repair	11,188	10,224	964	8,521	7,742	778	76.2	75.7	80.7
Operators, fabricators, and laborers	16,213	11,908	4,305	13,667	9,921	3,746	84.3	83.3	87.0
Machine operators, assemblers, and inspectors	7,798	4,563	3,235	6,942	4,109	2,833	89.0	90.1	87.6
Transportation and material moving occupations	4,122	3,771	351	2,854	2,597	257	69.2	68.9	73.2
Handlers, equipment cleaners, helpers, and laborers	4,294	3,574	720	3,872	3,215	657	90.2	90.0	91.3
Farming, forestry, and fishing	1,776	1,540	236	1,041	879	162	58.6	57.1	68.6

[1] Data not shown where base is less than 50,000.

NOTE: Detail for the above race and Hispanic origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Among white workers, women were more likely than men to be paid hourly rates, while the reverse was true—albeit to a lesser extent—for blacks and Hispanics. The following tabulation shows, however, that the situation is quite different when numbers are reported for full- and part-time workers.

	Percent paid hourly rates			
	Full time		*Part time*	
	Men	*Women*	*Men*	*Women*
White	52.0	52.5	79.1	81.2
Black	68.3	64.3	77.5	77.3
Hispanic origin	69.4	61.6	80.3	84.7

For full-time employees, the more hours people work, the more likely they are to be in a salaried rather than in an hourly paid position. About three-fifths of the men who usually worked exactly 40 hours a week were paid hourly, compared with just over two-fifths for those working 45 to 48 hours and one-fifth for those working 60 hours or more. This pattern was similar for women working full time.

The occupational distribution of hourly paid workers sheds further light on this relationship. As shown in table 1, fewer than one-fifth of workers in executive, administrative, and managerial occupations and about one-fourth of those in professional specialty occupations were paid hourly rates. A substantial number of employees in these occupations put in long workweeks, with one-quarter of the two groups (combined) working 49 hours or more a week.[2] In contrast, about nine-tenths of workers employed as machine operators, assemblers, and inspectors, and as handlers, equipment cleaners, helpers, and laborers were paid hourly wages, but fewer than one-tenth put in 49 or more hours a week.

Table 2. Median hourly earnings of workers paid hourly rates by selected characteristics, 1984 annual averages

Characteristic	Median hourly earnings		
	Total	Men	Women
Race and Hispanic origin			
Total, 16 years and over	$5.95	$7.27	$5.08
White	6.02	7.39	5.09
Black	5.43	6.26	4.99
Hispanic origin	5.30	6.17	4.73
Age			
16 to 19 years	3.64	3.80	3.50
20 to 24 years	4.94	5.31	4.43
25 to 29 years	6.52	7.50	5.52
30 to 34 years	7.23	8.63	5.81
35 to 39 years	7.37	9.46	5.81
40 to 44 years	7.17	9.75	5.51
45 to 49 years	7.23	9.96	5.46
50 to 54 years	7.20	9.65	5.63
55 to 59 years	6.85	9.15	5.40
60 to 64 years	6.45	8.68	5.30
65 to 69 years	4.85	5.23	4.71
70 years and over	4.38	4.82	4.21
Hours usually worked			
Part-time workers	4.04	3.92	4.10
Full-time workers	6.80	8.03	5.59
35 to 39 hours	5.20	6.04	5.04
40 hours	6.95	8.12	5.74
41 to 44 hours	7.35	8.32	5.84
45 to 48 hours	7.40	8.05	5.81
49 to 59 hours	7.45	7.84	5.91
60 hours or more	7.14	7.38	4.86
Occupation			
Managerial and professional specialty	8.62	9.84	8.25
Executive, administrative, and managerial	7.25	8.48	6.58
Professional specialty	9.42	10.34	9.16
Technical, sales, and administrative support	5.45	6.85	5.26
Technicians and related support	7.79	9.29	7.15
Sales occupations	4.18	4.99	4.01
Administrative support, including clerical	5.95	7.62	5.71
Service occupations	4.08	4.50	3.88
Private household	3.25	(1)	3.23
Protective service	6.20	6.52	4.96
Service, except private household and protective	4.01	4.25	3.81
Precision production, craft, and repair	8.84	9.23	5.75
Operators, fabricators, and laborers	6.38	7.20	5.15
Machine operators, assemblers, and inspectors	6.59	8.04	5.18
Transportation and material moving occupations	7.51	7.77	6.01
Handlers, equipment cleaners, helpers, and laborers	5.29	5.38	4.74
Farming, forestry, and fishing	4.35	4.40	4.07
Years of school completed			
Total, 25 years and over	6.96	8.67	5.51
Less than 4 years of high school	5.79	7.22	4.56
Elementary, 8 years or less	5.43	6.46	4.34
High school, 1 to 3 years	6.04	7.91	4.71
High school, 4 years or more	7.30	9.28	5.91
High school, 4 years	6.87	9.17	5.41
College, 1 to 3 years	7.80	9.52	6.47
College, 4 years or more	8.37	9.44	7.88
College, 4 years	8.18	9.34	7.38
College, 5 years or more	9.14	9.90	8.48

[1] Data not shown where base is less than 50,000.

NOTE: Data refer to persons 16 years and over, except years of school completed, which refers to the population 25 years and over.

The data illustrate the inverse relationship between the number of hours usually worked and the likelihood of being paid at an hourly rate. It is beyond the scope of this article, however, to fully explain the nature of this relationship, because information is not collected in the CPS on several of the factors which may be involved. These include data on the overtime provisions of the Fair Labor Standards Act, the provisions of collective bargaining agreements, the extent of nonpecuniary compensation derived from a job, and productivity.

Median hourly earnings

Median hourly earnings for people who were *actually paid* hourly rates in 1984 were $5.95—$7.27 for men and $5.08 for women. (See table 2.) It is important to understand the significance of what these data represent: Hourly earnings data are commonly calculated for *all* workers (wage and salary) based on information on their weekly or annual earnings. These figures will be typically higher than would be the case for those whose pay rate is hourly. For example, the median weekly earnings of all workers putting in *exactly* 40 hours a week—a majority of all workers—was $312 in 1984; when divided by 40, this turns out to be $7.80 an hour. The median hourly wage among workers actually paid by the hour and reported as usually working 40 hours a week was $6.95. This difference is to be expected, because the weekly earnings data include components of earnings beyond straight-time wages and many higher-paying jobs are salaried.

The overall female-to-male earnings ratio for full-time workers paid hourly rates—70 percent—is 5 percentage points higher than that associated with the medians in the weekly earnings series for all full-time workers (65 percent). This finding may be explained by the more homogeneous universe for the hourly earnings data mentioned above; that is, male-dominated higher-paying occupations are more likely to be salaried.

Between 1979 and 1984, the female-to-male earnings ratio for hourly paid workers rose considerably for whites, blacks, and Hispanics, whereas the black-to-white and the Hispanic-to-white earnings ratios were virtually unchanged. (See table 3.) Regardless of race or ethnicity, the hourly earnings of men rose by about 25 percent over the period and those of women about 40 percent; the Consumer Price Index for All Urban Consumers rose 43 percent.

Among age groups, median hourly earnings ranged from $3.64 for teenagers to highs in the $7.17–$7.37 range for age groups within the 30- to 54-year bracket in 1984. Men's wages peaked at about $10 an hour for those between 40 and 54 years of age, while the peak for women—$5.81—was not only much less, but also occurred at a younger age—among those in their thirties. The female-to-male earnings ratio, at about 90 percent for teenagers, declined with age to the 45-to-49 group, and rose thereafter. The higher ratios at both ends of the age spectrum may stem from the fact that higher proportions of wage earners in these age groups are paid at or near the minimum wage.

Hourly pay is wide-ranging among occupational and industry groups. Median hourly pay ranged from $4.08 for all service jobs to $9.42 among the professional specialty jobs. In the latter group, the median for men was a little more than a dollar higher per hour than that for women, a gap much closer than the overall difference. Among the major industrial groups, median hourly wages of both men and women were highest in mining, construction, durable goods manufacturing, and the transportation and public utilities group. Wages were lowest in retail trade, private households, personal services, entertainment and recreation, social services, and agriculture.

Earnings distribution

Clearly, median earnings do not tell the whole story. The median for two different groups could be similar; yet the distribution of earnings of one group may be tightly clustered around the median, while that for another group may be dispersed. Therefore, it is useful to look at distributions as well. Table 4 shows the percent distribution of hourly wages for major demographic groups. Regardless of the median, each demographic group has some people with earnings of less than $3 an hour and others with as much as $15 or more. (It should be noted that for some population groups, the extremes of the distribution may contain only a small number of sample observations.) The following discussion focuses briefly on the likelihood of wage earners receiving $12 an hour or more, the figure that is roughly twice the overall median of $5.95, and on those earning at or below the prevailing minimum wage of $3.35, which is a little more than half the median. Each of these high-paying and low-paying categories accounts for roughly one-tenth of all hourly paid workers.

Receiving $12 or more per hour. The likelihood of earning at least $12 an hour in 1984 was over 5 times as great for men (about 17 percent) as for women (3 percent). The proportion for white men was about half again as high as that for black men; among women, both whites and blacks were about equally as likely to earn this amount (each about 3 percent). Fewer than 2 percent of the workers under age 25 were in this higher paying category. Among workers 25 and over, the proportion rose from 6 percent for those with only an elementary school education to 23 percent for those completing 4 or more years of college. At each level of schooling completed, men were more likely than women to earn $12 an hour or more. However, the disparity narrowed at successively higher educational levels, as men not completing high school were more than 10 times as likely as women to earn this amount. Among those with 4 years of high school or more, men were 5 times as likely as women to earn $12 per hour or more (26 versus 5 percent). The ratio was 2 to 1 among college graduates (31 versus 16 percent).

Table 3. Median hourly earnings of workers paid hourly rates by sex, race, and Hispanic origin, 1979–84 annual averages

Characteristic	1979	1980	1981	1982	1983	1984
Median hourly earnings						
Total	$4.48	$4.91	$5.27	$5.46	$5.66	$5.95
Men	5.73	6.28	6.72	6.99	7.06	7.27
Women	3.66	4.01	4.35	4.65	4.89	5.08
White	4.55	4.97	5.30	5.51	5.74	6.02
Men	5.89	6.42	6.84	7.14	7.21	7.39
Women	3.66	4.02	4.36	4.66	4.89	5.08
Black	4.20	4.49	5.01	5.17	5.27	5.43
Men	5.03	5.30	5.93	6.11	6.08	6.28
Women	3.60	3.94	4.27	4.52	4.79	4.99
Hispanic origin	4.16	4.48	4.90	5.13	5.23	5.39
Men	4.88	5.14	5.45	5.80	5.92	6.17
Women	3.45	3.84	4.15	4.41	4.46	4.73
Earnings ratios (percent)						
Female-to-male	63.9	63.9	64.7	66.5	69.3	69.9
White	62.1	62.6	63.7	65.3	67.8	68.9
Black	71.6	74.3	72.0	74.0	78.7	79.5
Hispanic origin	70.7	74.7	76.1	76.0	75.3	76.7
Black-to-white	92.3	90.3	94.5	93.8	91.8	90.2
Men	85.4	82.6	86.7	85.6	84.5	85.0
Women	98.4	98.0	97.9	97.0	98.0	98.0
Hispanic origin-to-white	91.4	90.1	92.5	93.1	91.1	89.5
Men	82.9	80.1	79.7	81.2	82.1	83.5
Women	94.3	95.5	95.2	94.6	91.2	92.9

About 13 percent of full-time wage earners made at least $12—19 percent of the men and 4 percent of the women—but fewer than 3 percent of part-time workers earned this amount. Among workers putting in more than 40 hours a week, the proportion was 15 percent—18 percent for men and 6 percent for women.

Among the major occupational groups, 25 percent of both professional specialty workers and those in the precision production, craft, and repair group earned $12 an hour or more in 1984. At the lower extreme, 2 percent or fewer of those in sales; service (except protective service); and farming, forestry, and fishery jobs earned this much.

Minimum and subminimum wage workers. The prevailing minimum wage, which has been $3.35 per hour since January 1981, was established by the 1977 revisions to the Fair Labor Standards Act (FLSA) of 1938. About 4.1 million workers were reported as earning exactly $3.35 an hour in 1984, and 1.8 million were reported as earning less than this amount. Together, these workers constituted about 11 percent of all hourly paid workers.

It is important to note at the outset that the presence of a sizable group of hourly paid workers receiving less than the minimum wage does not necessarily indicate widespread violations of the FLSA, as there are a number of exemptions to its minimum wage provisions. These exemptions are wide-ranging and include employees in outside sales work, low volume retail trade and service firms, and seasonal amusement establishments.[3]

For the most part, those earning $3.35 and hour or less tend to be young. About 60 percent of those with these low earnings were under age 25—one-third were teenagers

Among teenagers alone, nearly 40 percent earned $3.35 or less. Persons 65 and over—while representing only 3 percent of the total number of minimum wage earners—also had a relatively high probability of earning at or below $3.35, as nearly 1 out of 5 hourly paid persons in this age group earned this amount. (See table 5.)

Nearly 15 percent of all women who were paid hourly rates earned the prevailing minimum wage or below, which was double the proportion for men. These percentages, however, differed greatly according to whether the employee usually worked full or part time, as shown in the following tabulation:

	Percent at or below $3.35		
	Both sexes	*Men*	*Women*
Total	11.0	7.5	14.8
Part-time workers	28.0	30.2	27.0
Full-time workers	5.2	3.5	7.6
35 to 39 hours	12.1	10.5	12.8
40 hours	4.6	3.3	6.5
41 hours or more	3.7	2.4	8.5

The number of part-time workers earning $3.35 or less, at 3.9 million, was nearly twice the number working full time. Given the fact that women made up a disproportionate share of part-time workers paid hourly rates (69 percent), those working part time accounted for almost 45 percent of all low-wage workers in 1984; men working part time accounted for about 21 percent.

An examination of minimum wage workers by race and ethnicity shows that only a slightly higher proportion of blacks than whites and Hispanics earned $3.35 or less. Nearly 14 percent of the black population were in this earnings group, compared with 11 percent of both Hispanics and whites.

Given the direct correlation of educational attainment and earnings, the likelihood that a person had hourly earnings at or below $3.35 per hour diminished with increased schooling. Among hourly paid workers aged 25 years and over with less than 4 years of high school, 10 percent were low wage earners, compared with 6 percent who finished 4 years of high school, and less than 4 percent of those with 4 years or more of college.

Of the four major regions in the United States, the largest proportion of those at or below the minimum wage lived in the South (40 percent). Overall, 13 percent of all hourly paid

Table 4. Percent distribution of hourly earnings of workers paid hourly rates by selected characteristics, 1984 annual averages

Characteristic	Number of workers (in thousands)	Percent distribution											Median hourly earnings
		Total	Under $3.00	$3.00 to $3.99	$4.00 to $4.99	$5.00 to $5.99	$6.00 to $6.99	$7.00 to $7.99	$8.00 to $9.99	$10.00 to $11.99	$12.00 to $14.99	$15.00 or more	
Sex and age													
Total, 16 years and over	54,143	100.0	2.2	18.5	15.3	14.1	10.2	8.2	11.7	9.4	7.0	3.2	$5.95
16 to 24 years	15,644	100.0	4.4	37.2	21.6	14.9	8.1	5.1	4.9	2.3	1.1	.5	4.30
25 years and over	38,499	100.0	1.3	11.4	12.7	13.7	11.1	9.4	14.4	12.2	9.4	4.3	6.96
Men, 16 years and over	28,140	100.0	.8	13.5	11.3	11.8	9.5	8.7	14.4	13.2	11.3	5.3	7.27
16 to 24 years	8,228	100.0	1.8	32.1	21.0	16.3	9.5	6.9	6.6	3.3	1.7	.7	4.66
25 years and over	19,911	100.0	.4	5.8	7.3	10.0	9.5	9.5	17.7	17.3	15.3	7.2	8.67
Women, 16 years and over	26,003	100.0	3.7	24.7	19.6	16.5	10.9	7.5	8.7	5.2	2.4	.9	5.08
16 to 24 years	7,416	100.0	7.2	42.8	22.3	13.3	6.4	3.2	3.0	1.3	.3	.2	3.99
25 years and over	18,587	100.0	2.3	17.4	18.5	17.7	12.7	9.2	10.9	6.8	3.2	1.2	5.51
Race, Hispanic origin, and sex													
White	46,098	100.0	2.4	18.2	15.1	13.9	10.2	8.3	11.8	9.6	7.3	3.3	6.02
Men	24,084	100.0	.8	12.8	11.0	11.5	9.5	8.9	14.6	13.6	11.8	5.6	7.39
Women	22,014	100.0	4.0	24.1	19.6	16.5	10.9	7.6	8.8	5.3	2.3	.8	5.09
Black	6,623	100.0	1.2	23.5	16.2	15.2	10.1	7.6	11.0	8.2	5.2	1.9	5.43
Men	3,346	100.0	.7	18.4	13.0	14.2	9.5	8.3	13.9	11.2	8.0	2.7	6.28
Women	3,277	100.0	1.7	28.8	19.5	16.3	10.7	6.8	8.0	5.0	2.3	.9	4.99
Hispanic origin	3,643	100.0	1.3	21.6	18.5	15.6	11.0	8.0	9.7	6.3	5.7	2.4	5.39
Men	2,165	100.0	.6	16.2	16.1	14.5	11.0	8.9	12.1	8.4	8.6	3.6	6.17
Women	1,479	100.0	2.3	29.7	21.9	17.3	10.9	6.6	6.1	3.2	1.6	.5	4.73
Full- or part-time status and sex													
Full-time workers	40,262	100.0	.9	10.6	13.8	14.7	11.6	9.7	14.3	11.6	8.9	3.9	6.80
Men	23,896	100.0	.3	7.2	10.0	11.9	10.3	9.8	16.4	15.1	13.0	5.9	8.03
Women	16,366	100.0	1.8	15.6	19.4	18.6	13.4	9.6	11.3	6.4	2.9	.9	5.59
Part-time workers	13,880	100.0	6.0	42.8	19.5	12.3	6.2	3.6	3.9	3.0	1.6	1.1	4.04
Men	4,243	100.0	3.6	48.9	18.6	11.3	5.2	2.9	3.4	2.5	1.8	1.7	3.92
Women	9,637	100.0	7.0	40.1	19.9	12.8	6.6	3.9	4.1	3.2	1.5	.9	4.10

NOTE: Data for the above race and Hispanic origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table 5. Workers paid hourly rates with earnings at or below the prevailing minimum wage by selected characteristics, 1984 annual averages

Characteristic	Number of workers (in thousands)				Percent distribution				Percent of all workers paid hourly rates		
	Total paid hourly rates	At or below $3.35			Total paid hourly rates	At or below $3.35			At or below $3.35		
		Total	At $3.35	Below $3.35		Total	At $3.35	Below $3.35	Total	At $3.35	Below $3.35
Sex and age											
Total, 16 years and over	54,143	5,963	4,125	1,838	100.0	100.0	100.0	100.0	11.0	7.6	3.4
16 to 24 years	15,644	3,582	2,539	1,043	28.9	60.1	61.6	56.7	22.9	16.2	6.7
25 years and over	38,499	2,381	1,586	795	71.1	39.9	38.4	43.3	6.2	4.1	2.1
Men, 16 years and over	28,140	2,116	1,626	490	52.0	35.5	39.4	26.7	7.5	5.8	1.7
16 to 24 years	8,226	1,492	1,166	326	15.2	25.0	28.3	17.7	18.1	14.2	4.0
25 years and over	19,911	623	460	163	36.8	10.4	11.2	8.9	3.1	2.3	.8
Women, 16 years and over	26,003	3,847	2,499	1,348	48.0	64.5	60.6	73.3	14.8	9.6	5.2
16 to 24 years	7,416	2,089	1,373	716	13.7	35.0	33.3	39.0	28.2	18.5	9.7
25 years and over	18,587	1,758	1,126	632	34.3	29.5	27.3	34.4	9.5	6.1	3.4
Race, Hispanic origin, and sex											
White	46,098	4,923	3,293	1,630	85.1	82.6	79.8	88.7	10.7	7.1	3.5
Men	24,084	1,684	1,273	411	44.5	28.2	30.9	22.4	7.0	5.3	1.7
Women	22,014	3,239	2,020	1,219	40.7	54.3	49.0	66.3	14.7	9.2	5.5
Black	6,623	896	737	159	12.2	15.0	17.9	8.7	13.5	11.1	2.4
Men	3,346	375	315	60	6.2	6.3	7.6	3.3	11.2	9.4	1.8
Women	3,277	521	422	99	6.1	8.7	10.2	5.4	15.9	12.9	3.0
Hispanic origin	3,643	415	314	101	6.7	7.0	7.6	5.5	11.4	8.6	2.8
Men	2,165	179	143	36	4.0	3.0	3.5	2.0	8.3	6.6	1.7
Women	1,479	236	171	65	2.7	4.0	4.1	3.5	16.0	11.6	4.4
Full- or part-time status and sex											
Full-time workers	40,262	2,079	1,497	582	74.4	34.9	36.3	31.7	5.2	3.7	1.4
Men	23,896	835	657	178	44.1	14.0	15.9	9.7	3.5	2.7	.7
Women	16,366	1,244	840	404	30.2	20.9	20.4	22.0	7.6	5.1	2.5
Part-time workers	13,880	3,883	2,627	1,256	25.6	65.1	63.7	68.3	28.0	18.9	9.0
Men	4,243	1,280	969	311	7.8	21.5	23.5	16.9	30.2	22.8	7.3
Women	9,637	2,602	1,658	944	17.8	43.6	40.2	51.4	27.0	17.2	9.8

NOTE: Detail for the above race and Hispanic origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

workers in the South earned the minimum or less, compared with 12 percent in the North Central region, 9 percent in the Northeast, and 8 percent in the West.

Nearly half of all minimum wage workers held service-type jobs in 1984. Service occupations with the highest concentrations of low-paying jobs included private household work, food services, and cleaning and building services. It is notable that persons employed as food service workers accounted for 31 percent of all workers at or below the minimum wage; of that number, roughly half worked at the minimum of $3.35 and half worked below this level. Another area in which there was a large proportion of persons working at or below $3.35 was in sales occupations, particularly in retail sales, in which nearly 1 out of every 4 employees earned the minimum or less. It should be remembered, however, that for many working in sales and food service occupations, tips and commissions supplement (to varying degrees) the hourly wages received.

THIS ARTICLE has focused on earnings as a pure wage paid to the employee—stripped of any effects of tips, premium pay for overtime, bonuses, and commissions. As the findings have suggested, the wealth of information available from the Current Population Survey helps provide a foundation for further studies which can shed more light on the conditions of workers paid hourly rates. ☐

——— FOOTNOTES ———

[1] See BLS *Measures of Compensation*, Bulletin 2239 (Bureau of Labor Statistics, 1986), for a complete description of all BLS earnings series. Among these are the Current Employment Statistics Survey, Area Wage Surveys, and Industry Wage Surveys.

[2] Data on workweeks by occupation refer to hours actually worked during each month's survey reference week rather than to the number of hours usually worked. In the case of workers with two or more jobs, the data are tabulated according to the occupation at which the employee works the most hours.

[3] See *Report of the Minimum Wage Study Commission*, Volume 1, p. 107, for a more complete list of full and partial exemptions.

APPENDIX: Hourly earnings data from the CPS

The Current Population Survey (CPS) is a monthly sample survey conducted by the U.S. Bureau of the Census for the Bureau of Labor Statistics, totaling about 59,500 households, in 50 States and the District of Columbia. Data on hourly earnings are collected from one-quarter of each month's CPS sample through questions 25B and 25C, which read:

> 25B. Is . . . paid by the hour on this job?
>
> 25C. How much does . . . earn per hour?

Although data are collected monthly, the numbers are aggregated into quarterly and annual averages to increase their statistical reliability. On a quarterly basis, the data are tabulated by sex, race, Hispanic origin, age, marital status, major occupation and industry groups, and usual full- or part-time status. Annual average data are also tabulated by region of residence, number of hours usually worked, years of school completed, and more occupational and industrial detail. While both the quarterly and annual average tabulations provide distributional data (for example, the number of workers earning between $5 and $5.99 per hour), the latter show more wage categories, as well as data for minimum wage workers.

Between 1973 and 1978, hourly earnings data were collected only once a year as part of a supplement to each May's CPS. Comparability between these and more recent data is affected by changes in questionnaire design, the coverage of the wage and salary worker universe, and the handling of survey nonresponses. As a result, whereas estimates of the proportion of all workers paid hourly rates between 1973 and 1978 ranged between 49 and 51 percent, changes introduced in 1979 caused the proportion to jump to 59 percent, where it has remained. In 1983, there were changes to the entire occupational classification system which preclude occupational comparisons with previous years. In addition, a change in the method of estimating medians introduced the same year affects the comparability of any medians under $3.00 or over $5.99 per hour.

As is the case with estimates from any sample survey, the results can vary by chance because a sample, rather than the entire population, is surveyed. A measure of this variation is called the standard error. If samples are repeatedly drawn and estimates are computed from each sample, in approximately 68 out of 100 samples the actual population value will differ from the sample estimate by less than one standard error. In approximately 90 out of 100 samples, the population value will differ from the sample estimate by less than 1.6 times the standard error. All statements of comparison appearing in this article are significant at the 90-percent level or higher. Users are cautioned against drawing conclusions from small differences among numbers for small population groups because of the relatively large sampling errors associated with estimates based on small sample sizes. In addition, results are subject to errors of response and nonreporting—errors possible even in a complete census. These can result from differences in the interpretation of questions, the inability or unwillingness of respondents to provide correct answers, the rounding of figures, errors of processing, and errors made in estimating values for missing data. For more information regarding the collection, processing, merits, and limitations of CPS data on earnings, see Earl F. Mellor, *Technical Description of the Quarterly Data on Weekly Earnings from the Current Population Survey*, Bulletin 2113 (Bureau of Labor Statistics, 1982).

Representative McMillan. One final question, and it also has to do with measuring poverty, and I realize the difficulty in comparative figures with other nations and even in our own analysis of the problem.

Would you clarify the degree to which figures could be made available that indicate what the poverty would be were there no public service assistance, no public assistance, and what impact public assistance has in reducing that poverty on an ongoing basis and is that available?

Mrs. Norwood. The Census Bureau, which is responsible for the poverty data together with the Office of Management and Budget, has done some research. They are not official figures, but they have issued some studies looking at the effect of transfer payments of various types of governmental programs, food stamps, for example, medical assistance, Medicaid, and so on. We could submit something from those data of the Census Bureau for the record. We would be glad to do that.

[The information referred to follows:]

Table 1. Number of Persons Below The Poverty Level and Poverty Rate--Current Poverty Definition and Alternative Methods of Valuing Noncash Benefits, by Selected Characteristics: 1979 to 1982

(Numbers in thousands. Persons as of March of the following year. For meaning of symbols, see text)

Year and characteristic	Number below the poverty level									
		Valuing food and housing benefits only			Valuing food, housing, and all medical benefits			Valuing food, housing, and medical benefits, excluding institutional expenditures		
	Current poverty definition	Market value	Recipient value	Poverty budget share value	Market value	Recipient value	Poverty budget share value	Market value	Recipient value	Poverty budget share value
ALL PERSONS										
1982	34 398	30 688	31 365	31 111	22 885	29 058	28 713	23 563	29 407	28 720
1981	31 822	27 932	28 651	28 317	20 500	26 500	26 175	21 046	26 784	26 175
1980	29 272	25 042	25 533	25 602	17 706	23 512	23 298	18 221	23 895	23 299
1979	26 072	21 698	22 270	22 409	15 098	20 152	20 184	15 698	20 478	20 186
RACE AND SPANISH ORIGIN										
White										
1982	23 517	21 280	21 665	21 507	16 272	20 102	19 937	16 653	20 363	19 938
1981	21 553	19 219	19 532	19 440	14 482	18 092	17 938	14 787	18 286	17 936
1980	19 699	17 381	17 727	17 688	12 728	16 257	16 151	12 997	16 503	16 151
1979	17 214	14 897	15 135	15 253	10 645	13 701	13 748	10 965	13 888	13 748
Black										
1982	9 697	8 347	8 633	8 533	5 839	7 982	7 811	6 128	8 068	7 817
1981	9 173	7 764	8 080	7 925	5 278	7 498	7 327	5 538	7 579	7 327
1980	8 579	6 787	7 008	7 004	4 291	6 404	6 289	4 525	6 529	6 289
1979	8 050	6 088	6 407	6 425	3 887	5 747	5 741	4 128	5 884	5 743
Spanish Origin[1]										
1982	4 301	3 808	3 817	3 887	2 949	3 755	3 673	3 029	3 780	3 673
1981	3 713	3 201	3 307	3 270	2 335	3 118	3 032	2 401	3 137	3 032
1980	3 491	2 923	3 014	2 980	2 069	2 785	2 733	2 111	2 829	2 733
1979	2 921	2 328	2 398	2 418	1 808	2 214	2 185	1 888	2 234	2 185
AGE										
Under 6 Years										
1982	4 977	4 472	4 597	4 535	3 587	4 423	4 297	3 649	4 431	4 297
1981	4 555	3 984	4 113	4 034	3 113	3 935	3 818	3 180	3 949	3 818
1980	4 107	3 502	3 602	3 607	2 670	3 468	3 376	2 722	3 482	3 376
1979	3 521	2 870	2 973	2 983	2 192	2 803	2 744	2 253	2 815	2 744
6 to 17 Years										
1982	8 670	7 514	7 663	7 623	5 811	7 275	7 121	5 982	7 320	7 123
1981	7 950	6 732	6 930	6 814	5 193	6 645	6 462	5 314	6 661	6 462
1980	7 438	6 032	6 239	6 179	4 334	5 900	5 728	4 452	5 940	5 726
1979	6 856	5 298	5 550	5 584	3 824	5 205	5 125	3 934	5 251	5 125
18 to 24 Years										
1982	4 548	4 182	4 259	4 224	3 557	4 122	4 053	3 613	4 143	4 054
1981	4 329	3 932	4 015	3 978	3 359	3 878	3 842	3 407	3 884	3 842
1980	3 818	3 429	3 482	3 484	2 888	3 370	3 337	2 902	3 388	3 337
1979	3 388	2 883	2 925	2 947	2 381	2 800	2 793	2 433	2 816	2 794
25 to 44 Years										
1982	8 031	7 178	7 344	7 272	6 011	7 033	6 897	6 124	7 069	6 899
1981	7 010	6 179	6 304	6 242	5 158	6 057	5 958	5 236	6 075	5 958
1980	6 242	5 319	5 456	5 418	4 311	5 224	5 137	4 365	5 256	5 137
1979	4 949	4 108	4 227	4 253	3 271	4 300	3 993	3 348	4 023	3 993
45 to 64 Years										
1982	4 423	4 048	4 133	4 151	3 008	3 807	3 874	3 153	3 877	3 876
1981	4 125	3 787	3 859	3 883	2 755	3 580	3 628	2 870	3 623	3 629
1980	3 799	3 405	3 480	3 530	2 489	3 148	3 298	2 611	3 232	3 298
1979	3 687	3 304	3 353	3 415	2 399	3 039	3 150	2 527	3 097	3 150
65 Years and Over										
1982	3 751	3 294	3 388	3 308	812	2 399	2 471	1 043	2 588	2 471
1981	3 853	3 347	3 430	3 380	924	2 427	2 488	1 058	2 561	2 488
1980	3 871	3 358	3 395	3 394	1 034	2 405	2 427	1 168	2 600	2 427
1979	3 682	3 237	3 242	3 248	1 033	2 304	2 378	1 200	2 478	2 379

[1] Persons of Spanish origin may be of any race.

Representative McMillan. Mr. Chairman, I think that concludes my questions. Thank you.

Senator Sarbanes. Congressman Solarz.

Representative Solarz. Thank you, Mr. Chairman.

Mrs. Norwood, how much of the long-term unemployment do you calculate is due to what might be characterized as geographical factors where there is depressed industry in that area and there are simply no jobs available in the community of the area and how much of it is due to what might be characterized as a lack of skills on the part of the individual who may live in an area where jobs are available but they don't have the capacity to fill the job?

Mrs. Norwood. I don't know. We could take a look at the long-term unemployment group and see what we can find out. My guess is that there are probably combinations of circumstances that are involved.

But I think it is important to recognize that the kinds of jobs we are creating tend to require more education and not less and more training and not less.

Representative Solarz. Since I'm the new boy on the ship, as it were, and I don't know quite how this procedure works, but are you in a position to look into that and get back to us?

Mrs. Norwood. Sure. We try to be of whatever service we can within existing resources of course.

Senator Sarbanes. And we try to get you adequate resources so you can be of service as well. We are concerned about that.

Mrs. Norwood. I'm not here today asking for more resources but, yes, that's something we can do quite easily and we'll be glad to.

Representative Solarz. Well, I would appreciate that because it does seem to me the implications and certainly the programmatic implications of this aggregation of the data on long-term unemployment are quite significant.

[The following information was subsequently supplied for the record:]

U. S. Department of Labor

Commissioner for
Bureau of Labor Statistics
Washington, D.C. 20212

MAR 26 1987

COPY

Honorable Stephen J. Solarz
House of Representatives
Washington, D.C. 20515

Dear Congressman Solarz:

During my testimony at the March 6 Joint Economic Committee hearing on the Nation's employment situation, you raised several questions to which I promised a response.

On the subject of long-term unemployment, an average of 2.2 million persons were unemployed for 15 weeks or more in 1986; 1.2 million of them were jobless for 27 weeks or longer (very long term). Both levels are sharply below their 1983 highs. (The trough of the 1981-82 recession was in November 1982, but long-term unemployment, which lags at cyclical turning points, reached its highest level in 1983.) Despite its substantial decline during the current economic recovery, long-term joblessness--particularly the very long component--was much higher in 1986 than it was in 1979, just prior to the 1980 and the 1981-82 recessions. Also, as the tabulation below shows, long-term joblessness has increased as a proportion of total unemployment over the past 20 years.

	Unemployed 15 weeks and over		Unemployed 27 weeks and over	
Year	Number (000's)	Percent of total	Number (000's)	Percent of total
1966......	526	18.3	239	8.3
1976......	2,366	32.0	1,384	18.2
1979......	1,241	20.2	535	8.7
1983......	4,210	39.3	2,559	23.9
1986......	2,232	27.1	1,187	14.4

The long-term unemployed include relatively high proportions of men, older workers, blacks, and workers formerly employed in manufacturing. For example, among all the unemployed, the proportion who remained jobless for 15 weeks or more was 27 percent

MAR 26 1987

in 1986. However, among unemployed men age 45-64, about 45 percent had been jobless for 15 or more weeks. Similarly, about 30 percent of unemployed black workers and 32 percent of persons who last worked in manual occupations were in the long-term jobless group, as were 35 percent of all those whose last jobs had been in manufacturing.

Although the distribution of extended unemployment by worker characteristics clearly shows a structural element, changes in the number of persons with long-term unemployment over time primarily reflect the cyclical ups and downs of the economy. It is, of course, difficult to distinguish between structural, cyclical, and frictional unemployment. However, frictional unemployment--that which comes about because of the movement of workers into and out of the labor force and from one job to another--is seldom thought of as being of long duration.

With regard to issues associated with the minimum wage, we have prepared the enclosed bibliography of recent studies.

On the subject of trade, we publish jointly with the Census Bureau the enclosed publication, Trade and Employment. The data provided in this report are useful in monitoring changes in U.S. imports and related domestic employment. We do not have specific information on the employment effect of imports, however, since industry employment trends are affected by many other factors, such as changing domestic demand, technology, other productivity improvements, etc.

Our response on questions relating to productivity trends is so lengthy that I have included it as an additional enclosure.

I look forward to future contact with you at the monthly hearings.

Sincerely yours,

JANET L. NORWOOD
Commissioner

Enclosures

Recent Developments in Productivity

Last month, the Bureau of Labor Statistics (BLS) published the data on productivity as measured by output per hour of all persons in the business economy for 1986. After rising substantially for two straight years following the 1982 recession, business productivity rose by 1 percent in 1985 and only showed a slight gain of 0.7 percent in 1986.

The productivity movements for the last few years have been responses to the cyclical recovery that has occurred following the recession ending in the fourth quarter of 1982. The current upturn, which is now 16 quarters long, has been one of the longer recovery periods in the post-World War II period.

There is a cyclical pattern of movement in productivity which has taken place throughout much of our history and underlies much of our current developments. During all of our recovery periods, substantial productivity growth has occurred after the trough of the recessions. However, since the post-1961 recovery, the productivity growth rate during each succeeding recovery has been somewhat lower than the previous one. The current productivity growth rate is the weakest of all the longer term recoveries, that is, all of those which lasted 16 quarters or more. For example, in this recovery, business productivity growth has been 1.3 percent (annual rate), in contrast with an average rate of 2.9 percent for the other longer term recoveries of previous cycles.

Although the usual acceleration took place during the recovery phase of the latest cycle, it has had only a small effect on the longer term rate for the business sector in the United States since 1973 and has extended the slowdown which has been occurring in the country since 1973.

Long-Term Developments

After growing at a rate of about 3 percent per year during the quarter of a century preceding 1973, productivity growth since 1973 in the business sector fell to a rate of less than 1 percent per year (0.9). The earlier period was one of unusually high productivity growth. During every earlier period of similar length, the average rate was lower--usually substantially lower. Therefore, the falloff since 1973 was very large in part because of the exceptionally high rate of productivity growth in the earlier period.

Nevertheless, by the same historical standards, the average productivity trend rate since 1973 has been unusually low. In fact, it has been the lowest rate for such a long period, all the way back to 1909, the first year for which we have fairly reliable data.

The productivity slowdown has been pervasive, affecting most sectors and industries. Some sectors, such as mining and public utilities, have shown very marked deceleration and even declines. Other sectors, such as manufacturing, have experienced some falloff but to a much more limited extent. Of the 150 industries for which we publish productivity indexes, over three-fourths had significant declines in their growth rates. In general, the mining and transportation, and some specific manufacturing industries, such as petroleum refining, motors and generators, and aluminum rolling and drawing, had the largest falloffs in their growth rates.

Much attention has been focused on the slowdown and many explanations have been advanced for it. These have included the effects of shifts in the industrial composition of the economy, changes in the composition of the work force, an apparent slowdown in the growth of capital-labor ratios, the leveling off of research and development expenditures, the rising price of energy during the 1970's, the diverting of investment to pollution abatement expenditures, the impact of other government regulations, the maturation of many industries with little new technology, and even changes in attitudes toward work in our society.

There is no simple explanation of the slowdown and no general agreement as to the quantitative impact of the various factors. Various researchers have stressed different explanations of the slowdown, but after careful examination, a significant part remains unexplained.

In BLS we have examined some of the factors which might appear to explain the slowdown. For example, one of the sources believed to have contributed to the productivity slowdown was an alleged falloff in the growth of the capital-labor ratio.

Historically, a major source of the growth in output per hour, the traditional measure of productivity, has been the increase in the capital stock which the work force has had available to generate increased output. The slowdown in productivity growth has been partially attributed by some investigators to a slowdown in capital formation that has failed to keep up with the growth in the work force.

In order to assess the effects of changes in the substitution of capital for labor on output per hour (labor productivity) movements, other measures of productivity have been developed by BLS which include in the denominator other inputs beside labor, such as capital services. The difference in the movements of the output per hour measures and these multifactor productivity measures indicates the effect of changes in the substitution rate.

For the business economy, the contribution to the 3 percent per year growth in output per hour of the growth in the capital-labor ratio was 1 percentage point from 1948-73. After 1973, despite the fact that the growth in output per hour fell to 0.9 percent per year, the contribution of the substitution of capital for labor had only dropped from 0.9 to 0.7 percent per year. For the nonfarm business sector, the decline in the capital contribution was even less (from 0.8 to 0.7 percentage points). There was virtually no slowdown in the substitution of capital for labor over the last decade and a half to explain much, if any, of the productivity slowdown.

Similar analyses have been done with regard to impact of the shift to services, increased Government regulations, etc., with the same general conclusion emerging. Their effects were limited. The sources of the productivity slowdown are still somewhat of a mystery.

Manufacturing

There is one sector which has been exhibiting a somewhat different pattern of productivity movement from the rest of the business economy. In the slowdown after 1973, while there was a slackening in the productivity growth for manufacturing as for the rest of the economy, the falloff in manufacturing was much smaller than for the other sectors. The deceleration was 0.6 percentage points (2.8 percent per year from 1948-73 to 2.2), much smaller than that which occurred in almost all of the other sectors.

In contrast to the business economy as a whole, the growth in the capital-labor ratio in manufacturing did not decline after 1973. In fact, it accelerated from a rate of 2.6 to 3.5 percent per year. As a result, the contribution of the substitution of capital for labor to manufacturing output per hour rose from 0.8 to 0.9 after 1973.

The somewhat lower rate of productivity growth in manufacturing ended in 1981 and since then it has accelerated to a rate greater than that of the entire pre-1973 period. Indeed, manufacturing productivity growth in recent years has been the highest of all sectors. These gains reflect output growth accompanied by actual declines in employment and hours.

International Comparisons

For many years, BLS has provided comparative measures of labor statistics for the U.S. and other industrialized countries to shed light on U.S. economic performance relative to these countries. The principal measures developed cover labor productivity, hourly compensation, and unit labor costs for manufacturing for the U.S. and 11 other industrialized countries (Canada, Germany, France, Japan, the United Kingdom, Belgium, Denmark, Norway, Sweden, the Netherlands, and Italy).

The comparative manufacturing labor productivity measures are limited to trend comparisons rather than level comparisons because the data needs for comparing levels are more rigorous than for comparing movements. Output and input data within each country must be carefully matched and coverage and definitions closely aligned when developing level comparisons. Some data inconsistencies can be tolerated in comparing trend measures because their effects are not likely to alter the movements appreciably. This is especially true when a consistent error of measurement is present within a series over a period of years. Finally, to compare levels of manufacturing output, it is essential to have appropriate indexes of the relative purchasing powers of national currencies. Such indexes are not available on a basis appropriate to the measurement of relative manufacturing output.

Compound Annual Rates of Growth in Output Per Hour of All Persons, the Contribution of Capital Intensity, and Multifactor Productivity, by Major Section 1948 to 1985

Measure	1948-73	1973-85
Private Business[1]		
Output per hour	2.9	0.9
Capital effects[2]	0.9	0.7
Multifactor productivity[3]	2.0	0.2
Private Nonfarm Business[1]		
Output per hour	2.5	0.7
Capital effects[2]	0.8	0.7
Multifactor productivity[3]	1.7	0.0
Manufacturing[1]		
Output per hour	2.8	2.2
Capital effects[2]	0.8	0.9
Multifactor productivity[3]	2.0	1.3

[1] Excludes government enterprises.

[2] Change in capital services per hour times capital's share of current-dollar output.

[3] Output per unit of combined labor and capital inputs.

SOURCE: Bureau of Labor Statistics

What Do the Data Show?

Looking at the long-term results from 1960 to 1985, output per hour in manufacturing has risen at annual rates of 2.7 to 8 percent in the 12 countries for which we have prepared comparative measures. The United States recorded the lowest rate of gain and Japan the highest. Within Europe, two of the smaller countries, Belgium and the Netherlands, have shown the best productivity growth performance.

All 12 industrialized countries have had productivity growth rate slowdowns since about 1973. As mentioned earlier, the rate for the U.S. business economy fell from 3 percent per year before 1973 to less than 1 percent per year. In manufacturing, the falloff has not been as great--only about 1 percentage point per year.

With the exception of Belgium, the falloffs in manufacturing productivity in the other countries have been larger--ranging from about 2 to 5 percentage points per year--but from higher pre-slowdown average rates of growth.

The U.S. productivity growth rate for manufacturing of 2.2 percent per year from 1973 to 1985 was about equal to the productivity growth rates recorded by Canada and Norway, but still lower than those of the other countries. However, the productivity gains recorded by most of the European countries resulted primarily, or entirely, from reductions in employment and hours, whereas the U.S. productivity gain--and the gains of Canada and Japan--resulted largely from rising output.

Recent Developments

Since the recession of 1982, nearly all of the countries have experienced stronger productivity growth. However, the U.S., Canada, and the United Kingdom standout, showing the greatest acceleration. In these three countries, manufacturing productivity rose at rates of 4 to 5 percent from 1982 to 1985, compared with rates of about 1 1/2 percent from 1973-81.

Japan still had the highest productivity growth rate, nearly 6 percent, but it did not represent much of an improvement over the 5 1/2 percent rate that it had during the slowdown, and Japan clearly did not return to the exceptionally high pre-slowdown rate of over 10 percent. In some of the European countries, productivity growth actually decelerated in the more recent years, and, with the exception of the United Kingdom, none of the others matched their pre-slowdown rates.

Enclosed are a summary table on comparative rates of growth in manufacturing productivity and a copy of our latest article comparing trends in manufacturing productivity and labor costs.

Table A. Workers paid hourly rates, whose wage is at or below the prevailing minimum wage, 1979-86

(Numbers in thousands)

	Year	Minimum Wage	At minimum wage		Below minimum wage	
			Number	Percent of hourly workers	Number	Percent of hourly workers
TOTAL						
	1979	$2.90	3,907	7.7	2,846	5.6
	1980	3.10	4,581	9.1	3,017	6.0
	1981	3.35	4,311	8.3	3,513	6.8
	1982	3.35	4,148	8.2	2,348	4.6
	1983	3.35	4,261	8.2	2,077	4.0
	1984	3.35	4,125	7.6	1,838	3.4
	1985	3.35	3,899	7.0	1,639	2.9
	1986	3.35	3,461	6.0	1,599	2.8
SERVICE-PRODUCING INDUSTRIES						
	1979	2.90	2,750	11.2	2,204	9.0
	1980	3.10	3,273	13.1	2,352	9.4
	1981	3.35	3,068	11.6	2,814	10.6
	1982	3.35	3,036	11.3	1,947	7.2
	1983	3.35	3,168	11.4	1,777	6.4
	1984	3.35	3,117	10.7	1,598	5.5
	1985	3.35	2,973	9.8	1,428	4.7
	1986	3.35	2,643	8.4	1,407	4.5

SOURCE: Current Population Survey

Representative **Solarz**. Now following up on Congressman McMillan's question, do you have any data on the impact of previous increases in the minimum wage on unemployment?

Mrs. **Norwood**. That's a $64 question. There is a whole literature on it in which people have tried to look at the effect on jobs and on various people. We have not done anything in that area, and I don't think that there is anything that I see that we could add to that today.

Representative **Solarz**. Well, perhaps you could get me some of the titles that you think are most illuminating and objective.

Mrs. **Norwood**. Sure.

Representative **Solarz**. I assume the tradeoff is the additional money that people have to spend as a result of the increase in the minimum wage which presumably results in greater demand and that demands greater jobs compared to the loss of jobs because it's no longer economical for particular employers to hire people at the higher minimum wage.

Mrs. **Norwood**. Well, it's clearly that and it's also of course the possible inflationary pressures and what happens not just to the minimum wage jobs, but to the relationship of the earnings in the minimum wage jobs and in other jobs. It's very complicated, but we'll be glad to let you know about the studies.

Representative **Solarz**. And something which somebody who didn't major in economics or get a graduate degree in the subject could have some remote hope of understanding.

[The information referred to follows:]

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Representative SOLARZ. Do you have any estimate of the impact on unemployment of the recent fall in the value of the dollar over the course of the last year?

Mrs. NORWOOD. No, we have not made any estimate and I don't think we could. What we have done is to factor those changes into our analysis of our export-import price data, but I don't see any way to attribute particular employment changes to that.

What we are looking at is how competitive we are in terms of price. That is a specific thing and we can look at the price changes of imports and of exports, and we do that. We have a program which we call our International Price Program which covers export prices and import prices. I think it is a tremendously important program and probably ought to be better known than it is.

Representative SOLARZ. Well, I would think that you ought to be able to trace where there is an increase in exports and to what extent that increase is due to the relative fall in the value of the dollar and thereby making our goods more attractive to foreign purchasers and then presumably translate the increase in exports into the number of jobs it takes to produce those exports.

Mrs. NORWOOD. One can go through that exercise, but I'm not sure that it has very much meaning because you are shifting all the factors of production as you are going through that. And it would be impossible to do for the import side, which is also an important side of our trade balance.

Representative SOLARZ. Now your figures seem to suggest that there was a rather dramatic increase, at least in the last month in the inflation rate. I think it went up like seven-tenths of a percent or something in that vicinity and last year it was, what, 1 percent over the year as a whole.

Does this lead you to the conclusion that we're witnessing the rebirth of an inflation problem in the country?

Mrs. NORWOOD. No, not at all. A large part of that increase was due to gasoline, and we know that the firming in those prices has turned around already. So I think we need to be a bit careful in analyzing those data. I'm not saying that there weren't some other changes there as well, but an awful lot of the 1 month's change was gasoline prices which are not holding up.

Representative SOLARZ. And, finally, how much of a problem is what I gather is this enormous increase in debt, in personal debt which has been accumulated. I have the impression that in historic terms we are almost at unprecedented levels of personal and corporate debt in the country.

Obviously if there were to be a recession, this could be a problem, but it's not clear to me how concerned ought we to be about this. Is this a house of cards waiting to collapse the minute things really begin to go bad and people can't pay their debt and you set in motion a kind of chain reaction or would we be able to manage the problems created by a recession in spite of this enormous personal and corporate debt?

Mrs. NORWOOD. We do have a lot of consumer debt. It's growth began slowing in the last quarter. Part of that is perhaps the result of changes in automobile prices. I think it bears watching certainly, but there have been some declines over the last quarter.

Representative **Solarz**. Well, how is it in historic terms? Is it substantially higher today by whatever indicia one uses to measure this than it has been in the past as a percentage of GNP?

Mrs. **Norwood**. Yes. There is no question about it.

Representative **Solarz**. What would you say are the most relevant figures here that would give a sense of the magnitude of the problem?

Mrs. **Norwood**. I don't happen to have those here. I can supply something for the record.

[The information referred to follows:]

WEEKLY ECONOMIC REPORT

01-Apr-87

	ANNUAL DATA			MONTHLY DATA							
	1984	1985	1986	Jul 1986	Aug 1986	Sep 1986	Oct 1986	Nov 1986	Dec 1986	Jan 1987	Feb 1987
	----	----	----	----	----	----	----	----	----	----	----
OUTPUT AND PRODUCTION											
Real GNP (Billions of 1982$)	3489.9	3585.2	3674.9	--	--	3688.4	--	--	3696.1	--	--
% change, annual rate	6.4	2.7	2.5	--	--	2.8	--	--	1.1	--	--
Industrial Production Index (1977=100)	121.4	123.8	125.0	124.9	125.1	124.9	125.3	126.0	126.6	126.8	127.3
% change	11.2	2.0	1.0	0.6	0.2	-0.2	0.3	0.6	0.5	0.2	0.4
Capacity Utilization (%) Manuf.	80.8	80.3	79.7	79.7	79.7	79.6	79.6	79.8	80.0	79.9	80.1
CREDIT DEMAND											
C & I Loans + Nonfin. Comm. Paper (SA) (Billions of $)	358.7	409.7	424.1	417.7	425.8	421.7	425.4	426.5	432.4	441.9	--
% change, annual rate	15.7	14.2	3.5	5.3	25.9	-11.0	11.1	3.1	17.9	29.8	--
C & I Loans	299.8	332.4	342.6	337.6	341.7	340.4	343.4	346.1	353.9	363.9	--
Nonfin. Comm. Paper	58.9	77.3	81.5	80.1	84.1	81.3	82.0	80.4	78.5	78.0	--
Consumer Installment Credit Total (SA) (Billions of $)	453.6	535.1	570.2	573.2	576.6	584.3	576.9	577.6	577.8	578.3	--
% change, annual rate	20.6	18.0	6.6	12.3	7.4	17.3	-14.2	1.5	0.4	1.0	--

Representative **Solarz**. Okay, but what would they be, debt in relationship to GNP or some other ratio?

Mrs. **Norwood**. Well, probably, but I would like to think about that a bit.

Representative **Solarz**. Well, thank you very much. Mr. Chairman, you said when I first arrived that John Kennedy when he was in the Senate said that of all the committees he was on this one was the most fun, and I think he was right. [Laughter.] Thank you very much.

Senator **Sarbanes**. I just have a couple of areas I want to develop.

I'm really very much intrigued by chart 1 and the question of a fast runup of the unemployment rate. Of course I've been trying to calibrate it off of the index at the bottom, which is the geographic timeframe, and that's a little difficult to do. I'll get the figures and do it month by month, and take a look at those.

But as I look at these and make my rough calculations, the unemployment rate can rise 3 points or maybe even more in a year's time, can't it? That happened apparently back in 1953-54, when it went from about 2.5 to 6 percent in a year, and in 1957-58 when it went from 4.5 to 7.5 and in 1974-75 when it went from roughly 5 to 9 percent, and in the last recession from, 8 to 11—all, I think it's reasonable to say, within a year's time.

That means that if we crack through the thin ice the economy's skating on that we could go to an unemployment rate of about 10 percent, on the basis of these past trends, within 9 to 12 months. Is that kind of apprehension reasonable?

Mr. **Plewes**. In the last recession we went from 7.2 to 10.8 in 16 months.

Senator **Sarbanes**. From 7.2 to——

Mr. **Plewes**. From 7.2 in July of 1981 to 10.8 in December of the following year. We are at 6.7 now but we don't know what the next path will be.

Senator **Sarbanes**. So in 16 months the unemployment rate increased 50 percent, if you look at it that way. It's the sort of rapid movement that causes a very sharp degree of concern when you look at all the indicators, particularly given the high level at which we already find ourselves with respect to the unemployment rate.

I wanted to ask just a couple of questions about the CPI. You are going to run the new market basket and the old weights for how long?

Mrs. **Norwood**. 6 months.

Senator **Sarbanes**. And in the first month there a one-tenth of a point——

Mrs. **Norwood**. Two-tenths.

Senator **Sarbanes**. I thought it was 0.7 versus 0.8; is that right?

Mrs. **Norwood**. Between the old and the new CPI, the percent change from December to January was two-tenths of a percentage point lower with the revised index than with the old index. Whether that will continue or not, no one knows.

Senator **Sarbanes**. So the figures would have been 0.7 and 0.9?

Mr. **Dalton**. No, 0.6 and 0.8. What we are comparing here are the unadjusted figures, the figures before seasonal adjustment. The 0.7 is the figure after seasonal adjustment for the new series. The old series is no longer seasonally adjusted. So the comparison, to make it strictly comparable, would be 0.6 and 0.8.

Senator **Sarbanes**. Then the difference is greater than I thought. I had seen a report I guess in the press or somewhere and I thought the difference was one-tenth of a point. Percentagewise that would have been about 15 percent, I guess, but it has just doubled on me.

So I guess there is more point actually to the question I'm going to put, and that is: What change in the market basket caused the difference? The difference is wider than I thought. Why is that?

Mr. **Dalton**. It's principally the change in the relative importance of energy in the new market basket. Energy is smaller in terms of its weight in the new market basket than it is in the old. So the rather sharp increase that we had in gasoline prices in January had a larger impact on the old index than it did on the new index.

Mrs. **Norwood**. On the other hand, when we extrapolate to longer periods, we should remember that there are other changes. Food, for example, has a lower weight. Food at home has a lower weight in the revised index than it did in the older index.

On the other hand, housing has a higher weight. So you've got energy with a lower weight, food at home with a lower weight and housing with a higher weight, and if you will remember, Mr. Chairman, in the 1970's particularly the late 1970's and the early 1980's it was food, energy, and housing which brought about our inflation. So the shift in those weights and the result of those shifts will depend in large part on the relative shifts of the prices that we face.

I should point out that there were other changes made in the index as well. We've improved the sampling, and particularly we have improved the homeownership component. It is a much better and much larger component and sample design, particularly the owner-occupied housing, than we have had in the past.

Senator **Sarbanes**. You mean you've improved the quality of the sample?

Mrs. **Norwood**. Yes.

Senator **Sarbanes**. Have you decreased the quantity of the sample?

Mrs. **Norwood**. No. We've doubled the sample in housing because we found that the sample that we had before was really not as large as we thought it ought to be as our testing and our model showed it ought to be.

We have also got a new sample of areas for collecting prices in the index and of course new population weights, bringing the 1980 population census weights in to replace the 1970 population weights. We're moving more toward the South and the West and away from the Northeast. That is where the population is and that's how the prices should be weighted, and there are a lot of other changes.

There will also be some changes that will be introduced over the next 2 years. We have a process for revising the sample of retail establishments in which we collect data. Those will be done in more cities as we move through this year and the next, and there are some other things that we have planned.

We did make an announcement that the work that we have done so far on the aging bias of the housing units seems to be extremely promising. We are now discussing that work with our advisory committees and we would hope if it seems as good after all of the review to bring that into place a year from now. We also feel that it is time for us to change the arithmetic base of the index because we are still on 1967 as a hundred. We now have had OMB approval to change the base to the same timeframe as the weights of the index, that is 1982–84, and we hope to do that next year in January.

Senator SARBANES. Between January 1986 and January 1987 real average weekly earnings declined a 10th of a point for workers on private nonagricultural payrolls, and in some industries such as mining, public utilities, and retail trade weekly earnings declined even before adjusting for inflation.

Now this is a pattern that is typical of a recession or a period of high inflation, and neither conditions holds right now. How do you explain this decline in real earnings?

Mrs. NORWOOD. I don't know. Those data have been bouncing around considerably. It may be the particular set of months that are being compared. As we have just commented, the CPI for the month of January went up. Whether that will stay up or not, we really don't know, although as I've said, insofar as the gasoline is concerned there has been some turnaround. So I would like to wait to look at that.

What we are seeing clearly in our employment cost index is a little over 3 percent change, year over year. If you compare that to the rate of inflation over the year, you would have a positive change in real ECI, which is really a better measure of compensation than average earnings.

Senator SABRANES. I guess my concern is that at the end of a slow but continuous 5-year period of some growth that we see a pattern of real earnings different from that characteristic of past recovery periods.

Mrs. NORWOOD. That's right.

Senator SARBANES. Your response, as I understand it says that perhaps it's not quite that way because of the January 1987 figure, which may have thrown if off because the seven-tenths of a percent was too much, and so forth.

But if you take a broader period to look at, I'm really concerned about trend lines. Is it an accurate perception that in this recovery period real earnings are not coming back the way they have in the previous recovery periods?

Mrs. NORWOOD. Well, it's quite clear, and what I was addressing really was just the particular points, you're quite right, and not the trend. It is clear that earnings have been going up much less in this recovery than in the past in large part because of the weakness in manufacturing which is where so much of the increase was going on.

We are seeing really fairly flat unit labor costs in this country now. We can take a look at this and report back to you. We had very high rates of inflation in the late 1970's which would have affected that measure. Therefore, that period probably would have had smaller gains in real earnings than now, but I'm not sure about that and I would like to check those data. We do know we had double-digit rates of inflation in the late 1970's.

What we are seeing that is important I think is reduced labor costs. You can look at this in two ways. You can look at it in terms of employer costs and then you look at it in terms of worker benefits.

Senator SARBANES. But in terms of past trends in a period neither of recession nor of high inflation, what has happened to real earnings in the last few years represents a historical departure, does it not?

Mrs. NORWOOD. Mr. Mark has just given me some data which maybe he could describe to you. I'm not sure those are in real terms, are they, Jerry?

Mr. MARK. The nominal hourly compensation for the business sector in this recovery, from the fourth quarter of 1982 to the current quarter, was at an average annual rate of 3.6 percent a year, and the average of the previous cycle of recovery was about 6.6. I don't have the CPI change during that period, but at least a strong proportion of it does show a much smaller increase in the current recovery.

Senator SARBANES. So people's standard of living, unlike in past recoveries, is not recovering.

Mrs. NORWOOD. Yes. There is a great deal of data which when looked at over the last decade show very little change in family income.

Senator SARBANES. I wanted to ask about your chart 3 that shows that the unemployment rate for women is currently almost as low as it was at the peak of the last major expansion, while the unemployment rate for men is much higher.

Also, for the first time in almost three decades the unemployment rate for women is no higher than for men. Is that an accurate reading of your chart?

Mrs. NORWOOD. Yes.

Senator SARBANES. The question then is why have women fared so much better in this recovery than men?

Mrs. NORWOOD. That is in large part I think because women fared a lot better during the recession than men did. Men had a lot more to recover from because of the very high rates of unemployment that they suffered during the recession and the fact that for so many of the men their jobs were in manufacturing industries, particularly durable manufacturing industries, which have recovered only about 50 percent of the jobs lost during the recession.

Senator SARBANES. Would your last point explain why the women fared better in the recession? If you tell me the reason they did better now is because they did better during the recession, then the next question is why did they do better during the recession, and in that also related to the durable goods situation?

Mrs. NORWOOD. Yes, and the fact that so many women, whether fortunately or unfortunately are working in the service producing sector which held up quite well in the recession and has done remarkably well in the recovery.

Senator SARBANES. How are women earning now relative to men?

Mrs. **Norwood**. Their earnings as a proportion of men have gone up a little bit. They are, what, two-thirds on average. I think the latest data show that they are about—I'll find the exact figure in a moment. That ratio has been edging up over the last several years, but it is still roughly only two-thirds that of men.

Senator **Sarbanes**. Finally, just to underscore it in the record, Congressman Solarz raised a line of questions about the question of debt overhang. I simply note that in our annual report we have a chart showing a very sharp increase in total debt as a percent of GNP.

It shows Federal debt as a percent of GNP, and then it shows private debt as a percent of GNP. What has happened, as the text makes clear, is that in the past the ratio of domestic nonfinancial debt to GNP, Federal Government debt plus private sector, has stayed at a remarkably constant level of approximately 1.40. That is this line here.

What happened in the past was that when the private debt went up the Federal debt came down and vice versa, which in part, I guess, would reflect countercyclical activity. But the total stayed at roughly the same level of GNP.

What has happened in recent years is very different. Both have gone up—both private debt and the Federal debt—and the consequence is a shift from this kind of trend line for total debt as a percent of GNP to this very sharply rising line. So we now have a tremendous overhang of debt, and the debt has really grown very significantly as percent of GNP.

Mrs. **Norwood**. The figure for the ratio of women's earnings to men is 66 percent.

Senator **Sarbanes**. Well, Commissioner, thank you very much.

Mrs. **Norwood**. Thank you.

Senator **Sarbanes**. We appreciate your testimony.

The committee stands adjourned.

[Whereupon, at 11:05 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, APRIL 3, 1987

Congress of the United States,
Joint Economic Committee,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senators Sarbanes, Proxmire, and Bingaman; and Representative McMillan.

Also present: William R. Buechner, Christopher J. Frenze, and Dena G. Stoner, professional staff members.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator **Sarbanes**. The Joint Economic Committee will come to order.

We are pleased to welcome back before the committee the very able Commissioner of Labor Statistics, Janet Norwood, accompanied by Thomas Plewes and Ken Dalton. We are once again pleased to have this panel before us.

This is but another in the regular monthly hearings that the JEC holds to review the employment and unemployment situation and it takes place on the morning on which the Bureau of Labor Statistics issues the latest unemployment figures.

Commissioner, we're pleased to have you back before us. Why don't you please go ahead and proceed.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS

Mrs. **Norwood**. Thank you very much, Mr. Chairman. It's always a pleasure to be here to try to supplement our press release with a few comments.

Employment growth slowed in March. Job gains were modest when compared to the average monthly increases of the past 6 months. Both the overall and the civilian unemployment rates—at 6.5 and 6.6 percent, respectively—were little changed from February. However, both rates were about half a percentage point lower than a year ago.

The number of payroll jobs, as measured in our business survey, rose by 165,000 from February to March. As has been the case during the entire current recovery period, the service-producing industries continued to show strong growth. Paced by significant increases in finance, insurance, and real estate, as well as in business and health services, service-sector employment grew by about 230,000 jobs over the month.

The goods-producing sector did not fare so well. In March, as winter recedes and good weather sets in, employment generally increases. After seasonal adjustment, however, nearly 70,000 jobs were lost in the goods-producing sector. The seasonal gains in construction may have been dampened in March because of improvement earlier in the year. Working hours also declined, and the manufacturing workweek returned to its January level. At 40.9 hours, however, factory hours are still quite high. In addition, overtime hours rose slightly.

Employment in durable goods manufacturing was somewhat weaker than in nondurables. After growing sharply in the first 2 years of the recovery, employment in durables manufacturing generally has been weak. Nondurables manufacturing jobs picked up in the last quarter of 1986 but have shown little overall growth this year. Within nondurables, however, the textile, printing and publishing, and rubber and plastics industries have made some job gains. During the 52 months of the current recovery, only about half of the 1.8 million durable goods manufacturing jobs lost during the recession were regained. In nondurables, nearly three-fifths of the 500,000 jobs lost have been recovered.

Total civilian employment, as measured in our household survey, was unchanged from February to March. However, among the employed, the number of persons working part time for economic reasons fell by more than 300,000. At 5.5 million, this group is now closer to the levels of recent months.

Both the number of people unemployed and the unemployment rate were little changed from February to March. And little over-the-month movement occurred among the major population groups. The rate for blacks—at 13.9 percent—remained more than twice that for whites. Although joblessness among Hispanics has come down some over the last 2 months, we need a longer time series to see a trend in this quite volatile number.

In summary, job growth continued in March, but at a somewhat slower pace than in recent months. The gains were concentrated entirely in the service-producing sector. The unemployment rate, although half a percentage point lower than a year ago, remained at about the level of the last few months.

Mr. Chairman, Mr. Plewes, Mr. Dalton, and I would be glad to try to answer any questions you might have.

[The table attached to Mrs. Norwood's statement, together with the press release referred to, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unad-justed rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1986									
March.......	7.5	7.2	7.2	7.1	7.1	7.1	7.1	7.1	.1
April.......	7.0	7.1	7.1	7.1	7.2	7.1	7.1	7.1	.1
May.........	7.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	–
June........	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	–
July........	7.0	7.0	7.0	7.0	7.0	6.9	7.0	7.0	.1
August......	6.7	6.8	6.8	6.8	6.8	6.9	7.0	6.8	.2
September...	6.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	–
October.....	6.6	6.9	6.9	6.9	7.0	6.9	6.9	7.0	.1
November....	6.6	6.9	6.9	6.9	6.9	6.9	7.0	7.0	.1
December....	6.3	6.7	6.7	6.7	6.6	6.7	6.7	6.7	.1
1987									
January.....	7.3	6.7	6.7	6.7	6.7	6.8	6.6	6.7	.2
February....	7.2	6.7	6.7	6.7	6.6	6.7	6.5	6.7	.2
March.......	6.9	6.6	6.6	6.6	6.6	6.6	6.5	6.6	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
April 1987

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1975 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1985 would be based, during 1985, on the adjustment of data from the period January 1975 through January 1985.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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THE EMPLOYMENT SITUATION: MARCH 1987

The number of jobs on nonfarm payrolls rose slightly in March, and unemployment was about unchanged, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall unemployment rate was 6.5 percent and the civilian rate was 6.6 percent; these rates had been 6.6 and 6.7 percent, respectively, for 3 consecutive months.

Nonagricultural payroll employment--as measured by the survey of business establishments--edged up by 165,000 in March, following several months of more substantial increases. Civilian employment--as measured through the household survey--was unchanged in March, after also showing large increases in recent months.

Unemployment (Household Survey Data)

Both the number of unemployed persons--7.9 million in March--and the civilian worker unemployment rate--6.6 percent--were little changed from their February marks, after seasonal adjustment. Likewise, jobless rates for most of the major labor force groups showed little or no over-the-month change. March's unemployment rates for adult men (5.8 percent), adult women (5.8 percent), teenagers (18.1 percent), whites (5.6 percent), blacks (13.9 percent), and Hispanics (9.0 percent) were either the same or little different from February. Jobless rates have declined, however, for most of these groups over the past year. (See tables A-2 and A-3.)

The number of persons employed part time for economic reasons--sometimes referred to as the partially unemployed--decreased by 325,000 in March to 5.5 million, following a rise of a similar magnitude in February. (See table A-4.)

Civilian Employment and the Labor Force (Household Survey Data)

Civilian employment, at 111.4 million in March, was unchanged after seasonal adjustment. There were no substantive over-the-month changes among any of the major demographic groups. At 61.1 percent, the proportion of the civilian population with jobs edged down 0.1 percentage point from its record high of the prior month. Over the past 12 months, civilian employment has risen by 2.6 million. About half of the increase has occurred within the managerial and professional occupations, and one-fifth has taken place in sales and administrative support occupations. (See tables A-2, A-3, and A-11.)

The civilian labor force was also unchanged over the month, and the labor force participation rate edged down to 65.4 percent. Over the year, the labor force has risen by 2.0 million.

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Feb.-Mar. change
	1986	1987	1987			
	IV	I	Jan.	Feb.	Mar.	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/	120,308	120,943	120,782	121,089	120,958	-131
Total employment 1/	112,170	112,995	112,759	113,122	113,104	-18
Civilian labor force	118,558	119,202	119,034	119,349	119,222	-127
Civilian employment	110,420	111,254	111,011	111,382	111,368	-14
Unemployment	8,138	7,948	8,023	7,967	7,854	-113
Not in labor force	62,807	62,800	62,793	62,649	62,957	308
Discouraged workers	1,127	1,168	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	6.8	6.6	6.6	6.6	6.5	-0.1
All civilian workers	6.9	6.7	6.7	6.7	6.6	-.1
Adult men	6.1	5.9	6.0	5.9	5.8	-.1
Adult women	6.0	5.8	5.9	5.8	5.8	0
Teenagers	17.8	17.9	17.7	18.0	18.1	.1
White	6.0	5.7	5.9	5.7	5.6	-.1
Black	14.1	14.2	14.3	14.3	13.9	-.4
Hispanic origin	10.2	9.7	10.6	9.6	9.0	-.6
ESTABLISHMENT DATA	Thousands of jobs					
Nonfarm employment	101,072	p101,838	101,626	p101,862	p102,026	p164
Goods-producing	24,892	p25,007	25,008	p25,040	p24,972	p-68
Service-producing	76,180	p76,831	76,618	p76,822	p77,054	p232
	Hours of work					
Average weekly hours:						
Total private	34.7	p34.9	34.8	p35.0	p34.8	p-0.2
Manufacturing	40.8	p41.0	41.0	p41.2	p40.9	p-.3
Overtime	3.5	p3.6	3.6	p3.6	p3.7	p.1

1/ Includes the resident Armed Forces. N.A.=not available.
p=preliminary.

Discouraged Workers (Household Survey Data)

In the first quarter of 1987, there were 1.2 million discouraged workers--persons who wanted to work but had not looked for jobs because they believed that they could not find work. The number of discouraged workers has fluctuated between 1.1 and 1.3 million for the past 3 years. Blacks and women continued to be disproportionately represented among the discouraged. (See table A-14.)

Industry Payroll Employment (Establishment Survey)

Total nonagricultural employment rose by 165,000 in March, a modest increase compared to those of the prior 6 months. Virtually all of the over-the-month employment gain occurred in the service-producing industries. (See table B-1.)

The services industry continued its strong expansion, with a 75,000 increase in jobs, two-thirds of which occurred in business and health services. Employment growth also continued in finance, insurance, and real estate. In retail trade, where there had been strong increases in the prior 2 months (after seasonal adjustment), there was a relatively small employment gain in March.

In the goods-producing sector, manufacturing employment edged down by 25,000. At 19.2 million, factory employment was about the same in March as it was at the end of 1986. Much of the over-the-month decline was concentrated in motor vehicles and in electrical and electronic equipment; each has lost about 30,000 jobs over the past year. Construction employment was down about 45,000, seasonally adjusted, but was still 50,000 above its year-end level. Mining employment changed little over the month, and has experienced little further erosion since the rapid job losses that occurred in its oil and gas extraction component during the first 9 months of 1986.

Weekly Hours (Establishment Survey Data)

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls was down 0.2 hour to 34.8 hours, seasonally adjusted, the same as the January level. The manufacturing workweek also reversed its increase of the prior month with a decline of 0.3 hour to 40.9, still quite high by historical standards. (See table B-2.)

Due to the drop in hours, the index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls was down 0.4 percent to 120.4 (1977=100), seasonally adjusted. The manufacturing index fell by 0.8 percent to 93.8, reflecting both the decline in hours and in employment. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings rose 0.3 percent in March after allowance for seasonality, while weekly earnings decreased 0.2 percent. Before seasonal adjustment, hourly earnings increased by 1 cent to $8.90, and weekly earnings were up by $1.23 to $307.94. Over the year, hourly earnings rose by 17 cents and weekly earnings were up $5.01. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 171.8 (1977=100) in March, seasonally adjusted, an increase of 0.3 percent from February. For the 12 months ended in March, the increase was 2.0 percent. The HEI excludes the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. In dollars of constant purchasing power, the HEI increased 0.1 percent during the 12-month period ended in February. (See table B-4.)

The Employment Situation for April 1987 will be released on Friday, May 8, at 8:30 A.M. (EDT).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes 250,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. At the time the first half year's factors are calculated (upon availability of data for December), historical data for the previous 5-year period are subject to revision. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $4.50 per issue or $31.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

[Numbers in thousands]

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Mar. 1986	Feb. 1987	Mar. 1987	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987
TOTAL									
Noninstitutional population[2]	181,678	183,738	183,915	181,678	183,114	183,297	183,575	183,738	183,915
Labor force[2]	118,002	119,707	120,089	118,880	120,426	120,336	120,782	121,089	120,958
Participation rate[3]	65.0	65.2	65.3	65.4	65.8	65.7	65.8	65.9	65.8
Total employed[2]	109,336	111,204	111,965	110,500	112,183	112,387	112,759	113,122	113,104
Employment-population ratio[4]	60.2	60.5	60.9	60.8	61.3	61.3	61.4	61.6	61.5
Resident Armed Forces	1,693	1,740	1,736	1,693	1,751	1,750	1,748	1,740	1,736
Civilian employed	107,643	109,464	110,229	108,807	110,432	110,637	111,011	111,382	111,368
Agriculture	2,899	2,764	2,932	3,252	3,215	3,161	3,145	3,236	3,284
Nonagricultural industries	104,744	106,700	107,297	105,555	107,217	107,476	107,866	108,146	108,084
Unemployed	8,667	8,503	8,124	8,380	8,243	7,949	8,023	7,967	7,854
Unemployment rate[5]	7.3	7.1	6.8	7.0	6.8	6.6	6.6	6.6	6.5
Not in labor force	63,675	64,031	63,826	62,798	62,688	62,961	62,793	62,649	62,957
Men, 16 years and over									
Noninstitutional population[2]	87,035	88,099	88,186	87,035	87,773	87,868	88,020	88,099	88,186
Labor force[2]	66,154	66,898	66,984	66,793	67,407	67,425	67,672	67,764	67,644
Participation rate[3]	76.0	75.9	76.0	76.7	76.8	76.7	76.9	76.9	76.7
Total employed[2]	61,226	61,921	62,291	62,221	62,833	62,986	63,187	63,335	63,282
Employment-population ratio[4]	70.3	70.3	70.6	71.5	71.6	71.7	71.8	71.9	71.8
Resident Armed Forces	1,540	1,584	1,575	1,540	1,592	1,593	1,591	1,584	1,575
Civilian employed	59,686	60,337	60,716	60,681	61,241	61,393	61,596	61,751	61,707
Unemployed	4,928	4,976	4,693	4,572	4,574	4,439	4,484	4,429	4,362
Unemployment rate[5]	7.4	7.4	7.0	6.8	6.8	6.6	6.6	6.5	6.4
Women, 16 years and over									
Noninstitutional population[2]	94,643	95,639	95,729	94,643	95,341	95,429	95,556	95,639	95,729
Labor force[2]	51,849	52,809	53,106	52,087	53,019	52,911	53,110	53,325	53,314
Participation rate[3]	54.8	55.2	55.5	55.0	55.6	55.4	55.6	55.8	55.7
Total employed[2]	48,110	49,282	49,674	48,279	49,350	49,401	49,572	49,787	49,822
Employment-population ratio[4]	50.8	51.5	51.9	51.0	51.8	51.8	51.9	52.1	52.0
Resident Armed Forces	153	156	161	153	159	157	157	156	161
Civilian employed	47,957	49,126	49,513	48,126	49,191	49,244	49,415	49,631	49,661
Unemployed	3,739	3,527	3,432	3,808	3,669	3,510	3,538	3,538	3,492
Unemployment rate[5]	7.2	6.7	6.5	7.3	6.9	6.6	6.7	6.6	6.6

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[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

[Numbers in thousands]

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Mar. 1986	Feb. 1987	Mar. 1987	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987
TOTAL									
Civilian noninstitutional population	179,985	181,998	182,179	179,985	181,363	181,547	181,827	181,998	182,179
Civilian labor force	116,309	117,967	118,358	117,187	118,675	118,586	119,034	119,349	119,222
Participation rate	64.6	64.8	65.0	65.1	65.4	65.3	65.5	65.6	65.4
Employed	107,643	109,464	110,229	108,807	110,432	110,637	111,011	111,382	111,368
Employment-population ratio[2]	59.8	60.1	60.5	60.5	60.9	60.9	61.1	61.2	61.1
Unemployed	8,667	8,503	8,124	8,380	8,243	7,949	8,023	7,967	7,854
Unemployment rate	7.5	7.2	6.9	7.2	6.9	6.7	6.7	6.7	6.6
Men, 20 years and over									
Civilian noninstitutional population	78,236	79,216	79,303	78,236	78,874	78,973	79,132	79,216	79,303
Civilian labor force	60,908	61,548	61,693	61,177	61,703	61,826	61,948	61,973	61,983
Participation rate	77.9	77.7	77.8	78.2	78.2	78.3	78.3	78.2	78.2
Employed	56,730	57,356	57,752	57,388	57,883	58,101	58,227	58,325	58,410
Employment-population ratio[2]	72.5	72.4	72.8	73.4	73.4	73.6	73.6	73.6	73.7
Agriculture	2,177	2,061	2,201	2,389	2,303	2,289	2,254	2,300	2,411
Nonagricultural industries	54,553	55,296	55,551	54,999	55,580	55,812	55,974	56,024	55,999
Unemployed	4,178	4,192	3,941	3,789	3,820	3,725	3,720	3,648	3,573
Unemployment rate	6.9	6.8	6.4	6.2	6.2	6.0	6.0	5.9	5.8
Women, 20 years and over									
Civilian noninstitutional population	87,263	88,237	88,321	87,263	87,933	88,016	88,150	88,237	88,321
Civilian labor force	48,060	49,148	49,374	48,065	49,043	48,923	49,161	49,348	49,355
Participation rate	55.1	55.7	55.9	55.1	55.8	55.6	55.8	55.9	55.9
Employed	44,948	46,232	46,531	44,934	46,067	46,058	46,261	46,475	46,498
Employment-population ratio[2]	51.5	52.4	52.7	51.5	52.4	52.3	52.5	52.7	52.6
Agriculture	529	535	530	589	675	621	628	641	589
Nonagricultural industries	44,420	45,697	46,001	44,345	45,392	45,437	45,633	45,835	45,909
Unemployed	3,111	2,916	2,843	3,131	2,976	2,865	2,900	2,873	2,857
Unemployment rate	6.5	5.9	5.8	6.5	6.1	5.9	5.9	5.8	5.8
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,485	14,546	14,555	14,485	14,557	14,558	14,545	14,546	14,555
Civilian labor force	7,342	7,271	7,287	7,945	7,929	7,837	7,926	8,028	7,884
Participation rate	50.7	50.0	50.1	54.9	54.5	53.8	54.5	55.2	54.2
Employed	5,964	5,875	5,946	6,485	6,482	6,478	6,524	6,582	6,460
Employment-population ratio[2]	41.2	40.4	40.9	44.8	44.5	44.5	44.9	45.2	44.4
Agriculture	194	168	202	274	237	251	264	295	284
Nonagricultural industries	5,771	5,707	5,745	6,211	6,245	6,227	6,260	6,287	6,176
Unemployed	1,378	1,396	1,341	1,460	1,447	1,359	1,402	1,446	1,424
Unemployment rate	18.8	19.2	18.4	18.4	18.2	17.3	17.7	18.0	18.1

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Mar. 1986	Feb. 1987	Mar. 1987	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987
WHITE									
Civilian noninstitutional population	155,005	156,431	156,561	155,005	155,979	156,111	156,313	156,431	156,561
Civilian labor force	100,558	101,809	102,137	101,208	102,455	102,503	102,746	102,893	102,797
Participation rate	64.9	65.1	65.2	65.3	65.7	65.7	65.7	65.8	65.7
Employed	93,984	95,377	96,032	94,955	96,281	96,533	96,717	96,995	96,998
Employment-population ratio[2]	60.6	61.0	61.3	61.3	61.7	61.8	61.9	62.0	62.0
Unemployed	6,574	6,432	6,105	6,253	6,174	5,970	6,029	5,898	5,799
Unemployment rate	6.5	6.3	6.0	6.2	6.0	5.8	5.9	5.7	5.6
Men, 20 years and over									
Civilian labor force	53,386	53,840	53,936	53,532	54,015	54,172	54,182	54,175	54,107
Participation rate	78.3	78.1	78.2	78.5	78.7	78.8	78.7	78.6	78.4
Employed	50,108	50,540	50,850	50,615	51,089	51,286	51,297	51,362	51,364
Employment-population ratio[2]	73.5	73.3	73.7	74.2	74.4	74.6	74.5	74.5	74.5
Unemployed	3,278	3,300	3,086	2,917	2,926	2,886	2,885	2,813	2,743
Unemployment rate	6.1	6.1	5.7	5.4	5.4	5.3	5.3	5.2	5.1
Women, 20 years and over									
Civilian labor force	40,828	41,639	41,834	40,826	41,540	41,514	41,680	41,762	41,828
Participation rate	54.5	55.1	55.3	54.5	55.1	55.0	55.2	55.2	55.3
Employed	38,522	39,576	39,839	38,519	39,399	39,456	39,568	39,735	39,839
Employment-population ratio[2]	51.4	52.3	52.7	51.4	52.3	52.3	52.4	52.6	52.7
Unemployed	2,306	2,062	1,995	2,307	2,141	2,058	2,111	2,028	1,989
Unemployment rate	5.6	5.0	4.8	5.7	5.2	5.0	5.1	4.9	4.8
Both sexes, 16 to 19 years									
Civilian labor force	6,345	6,330	6,367	6,850	6,900	6,817	6,885	6,955	6,862
Participation rate	53.5	53.2	53.3	57.8	58.0	57.3	57.8	58.4	57.5
Employed	5,355	5,261	5,343	5,821	5,793	5,791	5,852	5,898	5,795
Employment-population ratio[2]	45.2	44.2	44.8	49.1	48.7	48.7	49.2	49.5	48.5
Unemployed	990	1,070	1,024	1,029	1,107	1,026	1,033	1,057	1,067
Unemployment rate	15.6	16.9	16.1	15.0	16.0	15.1	15.0	15.2	15.5
Men	17.0	18.9	18.2	15.9	16.3	15.5	16.1	16.0	17.1
Women	14.2	14.8	13.9	14.1	15.7	14.6	13.8	14.3	13.9
BLACK									
Civilian noninstitutional population	19,889	20,218	20,249	19,889	20,120	20,152	20,187	20,218	20,249
Civilian labor force	12,479	12,696	12,687	12,634	12,719	12,707	12,831	12,957	12,844
Participation rate	62.7	62.8	62.7	63.5	63.2	63.1	63.6	64.1	63.4
Employed	10,643	10,872	10,927	10,770	10,910	10,968	10,997	11,101	11,053
Employment-population ratio[2]	53.5	53.8	54.0	54.2	54.2	54.4	54.5	54.9	54.6
Unemployed	1,836	1,824	1,760	1,864	1,809	1,739	1,833	1,855	1,791
Unemployment rate	14.7	14.4	13.9	14.8	14.2	13.7	14.3	14.3	13.9
Men, 20 years and over									
Civilian labor force	5,858	5,927	5,949	5,902	5,934	5,947	5,986	6,012	5,997
Participation rate	74.5	74.0	74.2	75.1	74.5	74.5	74.9	75.1	74.8
Employed	5,081	5,166	5,236	5,149	5,171	5,244	5,256	5,288	5,305
Employment-population ratio[2]	64.6	64.5	65.3	65.5	65.0	65.7	65.7	66.0	66.1
Unemployed	777	761	713	753	763	703	730	724	692
Unemployment rate	13.3	12.8	12.0	12.8	12.9	11.8	12.2	12.0	11.5
Women, 20 years and over									
Civilian labor force	5,787	5,991	5,971	5,799	5,943	5,907	5,984	6,030	5,987
Participation rate	58.5	59.5	59.3	58.6	59.3	58.9	59.6	59.9	59.4
Employed	5,082	5,218	5,211	5,084	5,200	5,182	5,221	5,255	5,211
Employment-population ratio[2]	51.4	51.9	51.7	51.4	51.9	51.7	52.0	52.2	51.7
Unemployed	705	773	760	715	743	725	763	775	776
Unemployment rate	12.2	12.9	12.7	12.3	12.5	12.3	12.8	12.9	13.0
Both sexes, 16 to 19 years									
Civilian labor force	834	778	768	933	842	853	860	915	861
Participation rate	39.1	36.2	35.6	43.7	39.3	39.8	40.1	42.6	40.0
Employed	480	488	481	537	539	542	520	559	537
Employment-population ratio[2]	22.5	22.7	22.3	25.2	25.1	25.3	24.2	26.0	24.9
Unemployed	354	290	287	396	303	311	340	356	324
Unemployment rate	42.5	37.2	37.4	42.4	36.0	36.5	39.5	38.9	37.6
Men	43.4	38.3	36.8	42.6	35.0	36.1	36.5	38.3	36.5
Women	41.5	36.2	38.0	42.2	37.0	36.9	43.2	39.5	38.8
HISPANIC ORIGIN									
Civilian noninstitutional population	12,219	12,692	12,732	12,219	12,505	12,540	12,653	12,692	12,732
Civilian labor force	7,871	8,329	8,326	7,926	8,226	8,320	8,431	8,457	8,392
Participation rate	64.4	65.6	65.4	64.9	65.8	66.3	66.6	66.6	65.9
Employed	7,006	7,445	7,547	7,095	7,437	7,446	7,538	7,644	7,639
Employment-population ratio[2]	57.3	58.7	59.3	58.1	59.5	59.4	59.6	60.2	60.0
Unemployed	865	884	780	831	789	874	893	813	753
Unemployment rate	11.0	10.6	9.4	10.5	9.6	10.5	10.6	9.6	9.0

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(Numbers in thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Mar. 1986	Feb. 1987	Mar. 1987	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987
CHARACTERISTIC									
Civilian employed, 16 years and over	107,643	109,464	110,229	108,807	110,432	110,637	111,011	111,382	111,368
Married men, spouse present	39,050	39,354	39,739	39,396	39,952	40,093	40,102	39,913	40,100
Married women, spouse present	26,736	27,622	27,937	26,761	27,333	27,400	27,525	27,817	27,965
Women who maintain families	5,777	5,924	5,963	5,754	6,041	6,005	5,985	5,906	5,933
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,415	1,375	1,494	1,655	1,582	1,621	1,650	1,647	1,739
Self-employed workers	1,332	1,297	1,303	1,450	1,425	1,400	1,370	1,454	1,418
Unpaid family workers	152	92	135	169	198	152	136	126	150
Nonagricultural industries:									
Wage and salary workers	96,899	98,456	99,092	97,661	98,869	99,164	99,550	99,748	99,834
Government	16,465	16,879	16,883	16,160	16,457	16,443	16,412	16,532	16,568
Private industries	80,435	81,576	82,209	81,501	82,412	82,721	83,138	83,216	83,265
Private households	1,138	1,128	1,134	1,227	1,183	1,189	1,269	1,204	1,227
Other industries	79,297	80,448	81,075	80,274	81,229	81,532	81,869	82,012	82,038
Self-employed workers	7,590	8,007	7,921	7,713	8,179	8,056	8,192	8,187	8,050
Unpaid family workers	254	237	284	243	252	239	246	255	273
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,316	5,583	5,232	5,548	5,563	5,596	5,505	5,780	5,456
Slack work	2,351	2,692	2,440	2,352	2,510	2,444	2,473	2,535	2,440
Could only find part-time work	2,696	2,548	2,504	2,908	2,714	2,867	2,695	2,828	2,698
Voluntary part time	14,717	14,947	15,145	13,778	14,021	13,877	14,170	14,061	14,167
Nonagricultural industries:									
Part time for economic reasons	5,121	5,328	4,999	5,295	5,319	5,342	5,201	5,459	5,164
Slack work	2,219	2,499	2,280	2,160	2,366	2,286	2,281	2,340	2,218
Could only find part-time work	2,641	2,501	2,434	2,819	2,626	2,765	2,599	2,742	2,595
Voluntary part time	14,321	14,535	14,681	13,351	13,567	13,455	13,750	13,597	13,682

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial disputes.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1986				1987	1987		
	I	II	III	IV	I	Jan.	Feb.	Mar.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7
U-2 Job losers as a percent of the civilian labor force	3.5	3.5	3.4	3.3	3.3	3.3	3.2	3.2
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force	5.5	5.5	5.4	5.4	5.1	5.2	5.1	5.1
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.7	6.8	6.6	6.5	6.3	6.4	6.3	6.2
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	7.0	7.0	6.8	6.8	6.6	6.6	6.6	6.5
U-5b Total unemployed as a percent of the civilian labor force	7.1	7.1	6.9	6.9	6.7	6.7	6.7	6.6
U-6 Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.4	9.6	9.3	9.2	9.0	9.1	9.1	8.9
U-7 Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.4	10.5	10.2	10.2	10.0	N.A.	N.A.	N.A.

N.A. = not available.

HOUSEHOLD DATA

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Mar. 1986	Feb. 1987	Mar. 1987	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987
CHARACTERISTIC									
Total, 16 years and over	8,380	7,967	7,854	7.2	6.9	6.7	6.7	6.7	6.6
Men, 16 years and over	4,572	4,429	4,362	7.0	6.9	6.7	6.8	6.7	6.6
Men, 20 years and over	3,789	3,648	3,573	6.2	6.2	6.0	6.0	5.9	5.8
Women, 16 years and over	3,808	3,538	3,492	7.3	6.9	6.7	6.7	6.7	6.6
Women, 20 years and over	3,131	2,873	2,857	6.5	6.1	5.9	5.9	5.8	5.8
Both sexes, 16 to 19 years	1,460	1,446	1,424	18.4	18.2	17.3	17.7	18.0	18.1
Married men, spouse present	1,843	1,743	1,721	4.5	4.5	4.3	4.2	4.2	4.1
Married women, spouse present	1,557	1,412	1,309	5.5	5.0	4.8	4.8	4.8	4.5
Women who maintain families	643	620	637	10.1	9.7	9.8	9.8	9.5	9.7
Full-time workers	6,879	6,488	6,275	6.8	6.6	6.3	6.4	6.3	6.2
Part-time workers	1,502	1,449	1,586	9.1	9.1	8.8	9.0	8.7	9.2
Labor force time lost[2]	--	--	--	8.1	7.7	7.6	7.6	7.6	7.4
INDUSTRY									
Nonagricultural private wage and salary workers	6,248	5,898	5,831	7.1	7.0	6.8	6.7	6.6	6.5
Mining	108	107	80	10.5	14.5	14.1	14.0	12.4	9.3
Construction	796	719	759	13.0	15.1	13.7	12.2	11.6	12.5
Manufacturing	1,578	1,479	1,496	7.2	7.1	6.9	6.8	6.8	6.9
Durable goods	907	883	856	6.9	6.6	6.4	6.8	6.8	6.7
Nondurable goods	671	596	639	7.6	7.9	7.7	6.8	6.9	7.3
Transportation and public utilities	361	247	281	5.8	4.4	4.6	4.8	4.0	4.6
Wholesale and retail trade	1,719	1,680	1,690	7.7	7.2	7.2	7.5	7.2	7.3
Finance and service industries	1,686	1,665	1,525	5.6	5.4	5.1	5.2	5.4	4.9
Government workers	654	640	585	3.9	3.6	3.3	3.6	3.7	3.4
Agricultural wage and salary workers	227	207	209	12.1	10.1	11.5	11.6	11.2	10.7

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Mar. 1986	Feb. 1987	Mar. 1987	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987
DURATION									
Less than 5 weeks	3,194	3,216	3,068	3,536	3,382	3,355	3,416	3,361	3,383
5 to 14 weeks	2,867	2,957	2,672	2,625	2,613	2,389	2,530	2,477	2,447
15 weeks and over	2,606	2,329	2,384	2,243	2,217	2,171	2,200	2,131	2,050
15 to 26 weeks	1,352	1,166	1,196	1,078	1,045	1,023	1,022	1,008	945
27 weeks and over	1,254	1,163	1,188	1,165	1,172	1,148	1,178	1,123	1,105
Average (mean) duration, in weeks	15.3	14.7	15.6	14.6	14.8	15.0	15.0	14.6	14.9
Median duration, in weeks	8.4	7.4	8.2	6.8	7.0	7.1	7.0	6.6	6.6
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	36.8	37.8	37.8	42.1	41.2	42.4	41.9	42.2	42.9
5 to 14 weeks	33.1	34.8	32.9	31.2	31.8	30.2	31.1	31.1	31.1
15 weeks and over	30.1	27.4	29.3	26.7	27.0	27.4	27.0	26.7	26.0
15 to 26 weeks	15.6	13.7	14.7	12.8	12.7	12.9	12.5	12.7	12.0
27 weeks and over	14.5	13.7	14.6	13.9	14.3	14.5	14.5	14.1	14.0

Table A-8. Reason for unemployment

(Numbers in thousands)

Reason	Not seasonally adjusted			Seasonally adjusted					
	Mar. 1986	Feb. 1987	Mar. 1987	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987
NUMBER OF UNEMPLOYED									
Job losers	4,654	4,469	4,227	4,210	3,947	3,890	3,971	3,839	3,822
On layoff	1,361	1,335	1,206	1,144	1,073	1,078	1,118	998	1,011
Other job losers	3,293	3,134	3,021	3,066	2,874	2,812	2,854	2,842	2,811
Job leavers	923	1,058	934	989	1,056	1,036	891	1,046	1,000
Reentrants	2,186	2,058	2,107	2,196	2,119	2,019	2,054	2,042	2,111
New entrants	904	918	857	1,006	1,076	1,015	1,084	1,040	956
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	53.7	52.6	52.0	50.1	48.1	48.9	49.6	48.2	48.4
On layoff	15.7	15.7	14.8	13.6	13.1	13.5	14.0	12.5	12.8
Other job losers	38.0	36.9	37.2	36.5	35.1	35.3	35.7	35.7	35.6
Job leavers	10.7	12.4	11.5	11.8	12.9	13.0	11.1	13.1	12.7
Reentrants	25.2	24.2	25.9	26.1	25.8	25.4	25.7	25.6	26.8
New entrants	10.4	10.8	10.5	12.0	13.1	12.8	13.6	13.1	12.1
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	4.0	3.8	3.6	3.6	3.3	3.3	3.3	3.2	3.2
Job leavers	.8	.9	.8	.8	.9	.9	.7	.9	.8
Reentrants	1.9	1.7	1.8	1.9	1.8	1.7	1.7	1.7	1.8
New entrants	.8	.8	.7	.9	.9	.9	.9	.9	.8

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Mar. 1986	Feb. 1987	Mar. 1987	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987
Total, 16 years and over	8,380	7,967	7,854	7.2	6.9	6.7	6.7	6.7	6.6
16 to 24 years	3,125	3,049	2,969	13.3	12.9	12.9	13.1	13.1	12.9
16 to 19 years	1,460	1,446	1,424	18.4	18.2	17.3	17.7	18.0	18.1
16 to 17 years	653	693	670	19.8	20.6	18.8	20.1	20.3	20.0
18 to 19 years	808	765	753	17.2	16.7	16.3	16.2	16.6	16.5
20 to 24 years	1,665	1,603	1,545	10.7	10.2	10.7	10.7	10.5	10.2
25 years and over	5,239	4,912	4,872	5.6	5.5	5.2	5.2	5.1	5.1
25 to 54 years	4,615	4,459	4,363	5.9	5.8	5.5	5.6	5.5	5.4
55 years and over	623	452	509	4.2	3.8	3.5	3.2	3.0	3.4
Men, 16 years and over	4,572	4,429	4,362	7.0	6.9	6.7	6.8	6.7	6.6
16 to 24 years	1,694	1,673	1,589	13.7	13.4	13.4	13.4	13.6	13.2
16 to 19 years	783	781	789	19.2	18.3	17.8	18.5	18.6	19.3
16 to 17 years	349	383	344	20.5	21.3	19.1	21.4	21.2	20.2
18 to 19 years	434	410	444	18.3	16.2	17.0	16.9	17.0	18.6
20 to 24 years	911	892	800	11.0	10.9	11.3	10.7	11.1	10.1
25 years and over	2,867	2,760	2,758	5.4	5.5	5.2	5.4	5.1	5.1
25 to 54 years	2,494	2,461	2,435	5.7	5.7	5.5	5.7	5.4	5.4
55 years and over	364	293	316	4.1	4.1	4.0	3.5	3.3	3.6
Women, 16 years and over	3,808	3,538	3,492	7.3	6.9	6.7	6.7	6.7	6.6
16 to 24 years	1,431	1,375	1,380	12.8	12.4	12.4	12.7	12.4	12.5
16 to 19 years	677	665	635	17.5	18.2	16.8	16.8	17.4	16.7
16 to 17 years	304	310	326	19.0	19.8	18.4	18.7	19.2	19.7
18 to 19 years	374	355	309	16.2	17.2	15.7	15.3	16.1	14.2
20 to 24 years	754	710	745	10.3	9.4	10.0	10.6	9.8	10.3
25 years and over	2,372	2,152	2,113	5.8	5.5	5.2	5.1	5.1	5.0
25 to 54 years	2,121	1,998	1,928	6.1	5.8	5.5	5.5	5.6	5.4
55 years and over	259	158	193	4.3	3.4	2.9	2.7	2.6	3.2

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Mar. 1986	Feb. 1987	Mar. 1987	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987
Civilian noninstitutional population	24,980	25,567	25,618	24,980	25,385	25,436	25,515	25,567	25,618
Civilian labor force	15,751	16,158	16,216	15,988	16,192	16,157	16,384	16,407	16,455
Participation rate	63.1	63.2	63.3	64.0	63.8	63.5	64.2	64.2	64.2
Employed	13,658	14,037	14,197	13,852	14,137	14,170	14,316	14,306	14,391
Employment-population ratio[2]	54.7	55.1	55.4	55.5	55.7	55.7	56.1	56.0	56.2
Unemployed	2,093	2,071	2,019	2,136	2,055	1,987	2,068	2,101	2,064
Unemployment rate	13.3	12.8	12.5	13.4	12.7	12.3	12.6	12.8	12.5
Not in labor force	9,229	9,409	9,402	8,992	9,193	9,279	9,131	9,160	9,163

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Mar. 1986	Mar. 1987	Mar. 1986	Mar. 1987	Mar. 1986	Mar. 1987
Total, 16 years and over[1]	107,643	110,229	8,667	8,124	7.5	6.9
Managerial and professional specialty	26,401	27,674	645	638	2.4	2.3
Executive, administrative, and managerial	12,475	13,002	356	349	2.8	2.6
Professional specialty	13,926	14,673	290	289	2.0	1.9
Technical, sales, and administrative support	34,032	34,594	1,733	1,730	4.8	4.8
Technicians and related support	3,287	3,254	128	97	3.7	2.9
Sales occupations	12,859	13,207	746	764	5.5	5.5
Administrative support, including clerical	17,886	18,134	859	869	4.6	4.6
Service occupations	14,663	14,882	1,424	1,290	8.9	8.0
Private household	938	939	35	44	3.6	4.4
Protective service	1,781	1,897	96	67	5.1	3.4
Service, except private household and protective	11,943	12,046	1,293	1,179	9.8	8.9
Precision production, craft, and repair	13,137	13,145	1,235	1,033	8.6	7.3
Mechanics and repairers	4,330	4,429	228	200	5.0	4.3
Construction trades	4,643	4,746	674	592	12.7	11.1
Other precision production, craft, and repair	4,164	3,970	333	242	7.4	5.7
Operators, fabricators, and laborers	16,402	16,785	2,293	2,179	12.3	11.5
Machine operators, assemblers, and inspectors	7,693	7,732	921	869	10.7	10.1
Transportation and material moving occupations	4,296	4,534	530	459	11.0	9.2
Handlers, equipment cleaners, helpers, and laborers	4,412	4,519	841	851	16.0	15.9
Construction laborers	633	610	246	255	28.0	29.5
Other handlers, equipment cleaners, helpers, and laborers	3,779	3,909	595	596	13.6	13.2
Farming, forestry, and fishing	3,008	3,149	365	339	10.8	9.7

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Mar. 1986	Mar. 1987	Mar. 1986	Mar. 1987	Mar. 1986	Mar. 1987	Mar. 1986	Mar. 1987	Mar. 1986	Mar. 1987
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,712	7,810	7,151	7,208	6,719	6,802	432	406	6.0	5.6
30 to 44 years	6,410	6,254	6,111	5,971	5,726	5,644	385	327	6.3	5.5
30 to 34 years	1,233	987	1,150	921	1,034	836	116	85	10.1	9.2
35 to 39 years	3,110	2,744	2,988	2,632	2,815	2,486	173	146	5.8	5.5
40 to 44 years	2,067	2,523	1,973	2,418	1,877	2,322	96	96	4.9	4.0
45 years and over	1,302	1,556	1,040	1,237	993	1,158	47	79	4.5	6.4
NONVETERANS										
Total, 30 to 44 years	18,084	19,159	17,090	18,104	16,067	17,082	1,023	1,022	6.0	5.6
30 to 34 years	8,304	8,711	7,913	8,288	7,424	7,823	489	465	6.2	5.6
35 to 39 years	5,605	6,109	5,296	5,774	5,001	5,428	295	346	5.6	6.0
40 to 44 years	4,175	4,339	3,881	4,042	3,642	3,831	239	211	6.2	5.2

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

[Numbers in thousands]

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Mar. 1986	Feb. 1987	Mar. 1987	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987
California									
Civilian noninstitutional population	19,982	20,401	20,440	19,982	20,275	20,314	20,364	20,401	20,440
Civilian labor force	13,257	13,563	13,624	13,295	13,540	13,476	13,403	13,626	13,655
Employed	12,309	12,654	12,764	12,384	12,625	12,569	12,568	12,779	12,833
Unemployed	948	909	860	911	915	907	835	847	822
Unemployment rate	7.1	6.7	6.3	6.9	6.8	6.7	6.2	6.2	6.0
Florida									
Civilian noninstitutional population	9,096	9,333	9,355	9,096	9,263	9,285	9,312	9,333	9,355
Civilian labor force	5,450	5,722	5,811	5,497	5,724	5,726	5,729	5,775	5,853
Employed	5,134	5,422	5,498	5,162	5,404	5,449	5,396	5,446	5,524
Unemployed	316	300	312	335	320	277	333	329	329
Unemployment rate	5.8	5.2	5.4	6.1	5.6	4.8	5.8	5.7	5.6
Illinois									
Civilian noninstitutional population	8,652	8,676	8,678	8,652	8,664	8,667	8,674	8,676	8,678
Civilian labor force	5,625	5,561	5,581	5,667	5,640	5,643	5,620	5,633	5,620
Employed	5,112	5,097	5,129	5,170	5,222	5,223	5,205	5,199	5,186
Unemployed	513	464	451	497	418	420	415	434	434
Unemployment rate	9.1	8.3	8.1	8.8	7.4	7.4	7.4	7.7	7.7
Massachusetts									
Civilian noninstitutional population	4,547	4,565	4,567	4,547	4,557	4,559	4,563	4,365	4,567
Civilian labor force	3,031	3,002	3,048	3,058	3,043	3,052	3,052	3,040	3,074
Employed	2,900	2,884	2,912	2,943	2,922	2,950	2,946	2,935	2,953
Unemployed	130	117	136	115	121	102	106	105	121
Unemployment rate	4.3	3.9	4.5	3.8	4.0	3.3	3.5	3.5	3.9
Michigan									
Civilian noninstitutional population	6,841	6,903	6,909	6,841	6,882	6,888	6,897	6,903	6,909
Civilian labor force	4,312	4,431	4,463	4,349	4,472	4,497	4,496	4,474	4,500
Employed	3,897	4,038	4,088	3,953	4,099	4,135	4,163	4,092	4,138
Unemployed	414	393	376	396	373	362	333	382	362
Unemployment rate	9.6	8.9	8.4	9.1	8.3	8.0	7.4	8.5	8.0
New Jersey									
Civilian noninstitutional population	5,905	5,961	5,966	5,905	5,942	5,948	5,956	5,961	5,966
Civilian labor force	3,818	3,895	3,950	3,834	3,914	3,900	3,857	3,908	3,965
Employed	3,630	3,707	3,781	3,670	3,737	3,727	3,718	3,746	3,819
Unemployed	188	188	169	164	177	173	139	162	146
Unemployment rate	4.9	4.8	4.3	4.3	4.5	4.4	3.6	4.1	3.7
New York									
Civilian noninstitutional population	13,720	13,762	13,766	13,720	13,742	13,747	13,759	13,762	13,766
Civilian labor force	8,310	8,389	8,450	8,358	8,378	8,423	8,511	8,484	8,511
Employed	7,706	7,923	8,000	7,802	7,895	7,921	8,009	8,065	8,108
Unemployed	604	466	450	556	483	502	502	419	403
Unemployment rate	7.3	5.6	5.3	6.7	5.8	6.0	5.9	4.9	4.7
North Carolina									
Civilian noninstitutional population	4,733	4,809	4,816	4,733	4,785	4,792	4,802	4,809	4,816
Civilian labor force	3,142	3,259	3,239	3,164	3,201	3,221	3,271	3,290	3,264
Employed	2,964	3,078	3,079	2,990	3,029	3,048	3,115	3,122	3,107
Unemployed	178	181	160	174	172	173	156	168	157
Unemployment rate	5.7	5.6	4.9	5.5	5.4	5.4	4.8	5.1	4.8
Ohio									
Civilian noninstitutional population	8,098	8,124	8,127	8,098	8,112	8,115	8,122	8,124	8,127
Civilian labor force	5,233	5,205	5,154	5,297	5,264	5,276	5,287	5,303	5,215
Employed	4,818	4,732	4,749	4,896	4,875	4,861	4,850	4,848	4,824
Unemployed	415	473	405	401	389	415	437	455	391
Unemployment rate	7.9	9.1	7.9	7.6	7.4	7.9	8.3	8.6	7.5
Pennsylvania									
Civilian noninstitutional population	9,228	9,266	9,269	9,228	9,250	9,254	9,262	9,266	9,269
Civilian labor force	5,635	5,427	5,446	5,722	5,557	5,528	5,610	5,561	5,530
Employed	5,188	5,078	5,106	5,289	5,212	5,229	5,267	5,255	5,204
Unemployed	447	349	340	433	345	299	343	306	326
Unemployment rate	7.9	6.4	6.2	7.6	6.2	5.4	6.1	5.5	5.9
Texas									
Civilian noninstitutional population	11,922	12,134	12,154	11,922	12,069	12,089	12,115	12,134	12,154
Civilian labor force	8,025	8,226	8,107	8,054	8,301	8,354	8,293	8,315	8,134
Employed	7,348	7,468	7,438	7,403	7,506	7,550	7,497	7,592	7,494
Unemployed	677	759	668	651	793	804	796	723	640
Unemployment rate	8.4	9.2	8.2	8.1	9.6	9.6	9.6	8.7	7.9

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table A-14. Persons not in labor force by reason, sex, and race, quarterly averages

(In thousands)

Reason, sex, and race	Not seasonally adjusted		Seasonally adjusted				
	1986	1987	1986				1987
	I	I	I	II	III	IV	I
TOTAL							
Total not in labor force	64,003	63,994	62,817	62,693	62,664	62,807	62,800
Do not want a job now	58,080	58,063	57,193	56,838	56,865	57,013	57,094
Current activity: Going to school	7,879	8,098	6,249	6,513	6,189	6,330	6,428
Ill, disabled	4,205	4,187	4,189	4,040	4,087	3,928	4,152
Keeping house	26,697	26,168	26,796	26,487	26,176	26,000	26,290
Retired	15,192	15,828	15,133	15,326	15,885	16,069	15,768
Other	4,107	3,783	4,826	4,471	4,528	4,686	4,456
Want a job now	5,924	5,932	5,789	5,882	5,980	5,808	5,823
Reason not looking: School attendance	1,648	1,557	1,416	1,379	1,578	1,427	1,342
Ill health, disability	797	804	835	898	903	746	842
Home responsibilities	1,366	1,225	1,365	1,311	1,203	1,347	1,222
Think cannot get a job	1,149	1,217	1,107	1,119	1,150	1,127	1,168
Job-market factors[1]	815	805	765	761	736	851	756
Personal factors[2]	334	412	343	358	414	277	412
Other reasons[3]	964	1,130	1,065	1,175	1,145	1,160	1,249
Men							
Total not in labor force	20,994	21,181	20,225	20,347	20,460	20,454	20,408
Do not want a job now	18,971	19,114	18,350	18,441	18,382	18,454	18,434
Want a job now	2,023	2,068	1,940	1,948	2,087	2,026	2,005
Reason not looking: School attendance	856	767	726	667	824	680	652
Ill health, disability	347	377	364	471	438	359	396
Think cannot get a job	448	501	438	392	425	497	490
Other reasons[3]	372	422	412	418	399	490	467
Women							
Total not in labor force	43,010	42,813	42,593	42,346	42,204	42,354	42,392
Do not want a job now	39,109	38,949	38,843	38,396	38,482	38,559	38,660
Want a job now	3,901	3,864	3,849	3,933	3,893	3,782	3,818
Reason not looking: School attendance	792	790	690	711	754	747	690
Ill health, disability	450	427	471	426	465	387	447
Home responsibilities	1,366	1,225	1,365	1,311	1,203	1,347	1,222
Think cannot get a job	701	716	669	727	725	630	678
Other reasons	593	707	653	757	746	670	782
White							
Total not in labor force	54,712	54,566	53,767	53,674	53,511	53,564	53,623
Do not want a job now	50,367	50,290	49,506	49,387	49,208	49,367	49,450
Want a job now	4,346	4,275	4,265	4,352	4,298	4,217	4,195
Reason not looking: School attendance	1,127	1,058	994	975	1,065	975	933
Ill health, disability	592	579	625	618	625	536	611
Home responsibilities	1,025	912	1,020	1,032	898	975	907
Think cannot get a job	786	843	749	741	780	817	800
Other reasons	816	883	876	985	931	914	944
Black							
Total not in labor force	7,498	7,571	7,274	7,238	7,423	7,405	7,341
Do not want a job now	6,115	6,116	5,947	5,937	6,027	6,020	5,945
Want a job now	1,384	1,454	1,353	1,299	1,425	1,423	1,436
Reason not looking: School attendance	456	414	386	333	460	381	353
Ill health, disability	189	208	211	220	248	192	229
Home responsibilities	293	289	287	270	263	318	287
Think cannot get a job	325	344	321	296	275	291	342
Other reasons	122	198	147	180	179	241	224

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[1] Job-market factors include "could not find job" and "thinks no job available."

[2] Personal factors include "employers think too young or old," "lacks education or training," and "other personal handicap."

[3] Includes small number of men not looking for work because of home responsibilities.

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Mar. 1986	Jan. 1987	Feb. 1987 p	Mar. 1987 p	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987 p	Mar. 1987 p
Total	98,617	100,185	100,500	101,148	99,484	101,068	101,322	101,626	101,862	102,026
Total private	81,604	83,289	83,324	83,862	82,785	84,178	84,394	84,708	84,958	85,060
Goods-producing	24,431	24,406	24,343	24,441	24,945	24,891	24,920	25,008	25,040	24,972
Mining	842	726	722	726	852	742	738	731	732	735
Oil and gas extraction	514.2	418.2	415.1	414.7	518	420	414	412	414	418
Construction	4,441	4,675	4,559	4,633	4,838	4,993	4,996	5,109	5,094	5,047
General building contractors	1,200.9	1,235.8	1,200.2	1,204.4	1,298	1,307	1,298	1,333	1,322	1,302
Manufacturing	19,148	19,005	19,062	19,082	19,255	19,156	19,186	19,168	19,214	19,190
Production workers	12,982	12,893	12,950	12,981	13,061	13,020	13,053	13,031	13,078	13,063
Durable goods	11,384	11,193	11,231	11,246	11,418	11,282	11,289	11,265	11,300	11,280
Production workers	7,528	7,385	7,423	7,447	7,545	7,452	7,466	7,440	7,480	7,469
Lumber and wood products	695.9	726.0	728.8	732.0	715	743	749	754	755	752
Furniture and fixtures	494.8	503.8	505.0	506.0	493	500	500	503	503	504
Stone, clay, and glass products	578.9	573.8	572.6	578.9	594	591	594	595	598	594
Primary metal industries	791.1	741.8	753.0	758.6	787	751	752	741	753	755
Blast furnaces and basic steel products	295.0	263.8	273.3	278.0	293	271	270	264	274	276
Fabricated metal products	1,443.9	1,422.9	1,421.2	1,421.6	1,450	1,427	1,431	1,430	1,430	1,427
Machinery, except electrical	2,122.3	2,024.8	2,042.6	2,046.2	2,118	2,036	2,030	2,029	2,043	2,042
Electrical and electronic equipment	2,175.3	2,155.6	2,149.9	2,146.6	2,177	2,166	2,164	2,156	2,154	2,147
Transportation equipment	1,991.3	1,978.7	1,988.3	1,980.2	1,989	1,993	1,990	1,979	1,986	1,978
Motor vehicles and equipment	857.7	822.2	833.2	821.8	858	837	832	826	836	823
Instruments and related products	724.2	706.5	705.0	706.6	726	710	709	709	707	708
Miscellaneous manufacturing	356.0	359.5	364.2	369.3	369	365	370	369	371	373
Nondurable goods	7,764	7,812	7,831	7,836	7,837	7,874	7,897	7,903	7,914	7,910
Production workers	5,454	5,508	5,527	5,534	5,516	5,568	5,587	5,591	5,598	5,594
Food and kindred products	1,573.0	1,604.4	1,600.5	1,596.1	1,632	1,654	1,657	1,654	1,657	1,656
Tobacco manufactures	60.9	61.7	59.8	56.9	63	61	60	59	60	59
Textile mill products	703.4	718.6	721.5	723.5	707	717	719	722	727	727
Apparel and other textile products	1,119.9	1,108.2	1,117.3	1,119.1	1,117	1,112	1,124	1,123	1,116	1,116
Paper and allied products	684.7	690.3	689.7	690.1	688	694	697	694	695	694
Printing and publishing	1,470.8	1,498.9	1,504.1	1,507.2	1,469	1,493	1,493	1,500	1,506	1,506
Chemicals and allied products	1,029.8	1,013.8	1,017.2	1,017.8	1,031	1,023	1,020	1,021	1,021	1,019
Petroleum and coal products	163.7	155.3	155.3	155.8	166	160	159	159	159	158
Rubber and miscellaneous plastics products	800.5	811.4	815.0	818.8	804	809	815	819	820	821
Leather and leather products	157.0	149.5	150.1	150.9	160	151	153	152	153	154
Service-producing	74,186	75,779	76,157	76,707	74,539	76,177	76,402	76,618	76,822	77,054
Transportation and public utilities	5,215	5,312	5,316	5,344	5,280	5,351	5,359	5,382	5,389	5,411
Transportation	3,001	3,083	3,083	3,108	3,053	3,117	3,125	3,140	3,143	3,162
Communication and public utilities	2,214	2,229	2,233	2,236	2,227	2,234	2,234	2,242	2,246	2,249
Wholesale trade	5,803	5,826	5,826	5,842	5,841	5,859	5,859	5,864	5,876	5,880
Durable goods	3,466	3,478	3,476	3,484	3,480	3,489	3,491	3,495	3,497	3,498
Nondurable goods	2,337	2,348	2,350	2,358	2,361	2,370	2,368	2,369	2,379	2,382
Retail trade	17,418	18,033	17,880	17,988	17,828	18,197	18,206	18,289	18,376	18,411
General merchandise stores	2,246.4	2,391.3	2,283.1	2,292.1	2,333	2,367	2,341	2,333	2,366	2,380
Food stores	2,865.9	2,984.3	2,983.9	2,973.3	2,901	2,968	2,979	2,990	3,008	3,006
Automotive dealers and service stations	1,917.6	1,969.7	1,962.8	1,967.3	1,939	1,977	1,984	1,988	1,993	1,987
Eating and drinking places	5,692.1	5,788.5	5,811.7	5,924.4	5,868	6,006	6,035	6,080	6,092	6,108
Finance, insurance, and real estate	6,144	6,444	6,451	6,510	6,184	6,429	6,472	6,495	6,518	6,554
Finance	3,089	3,233	3,238	3,248	3,095	3,220	3,236	3,239	3,248	3,255
Insurance	1,898	1,998	2,007	2,016	1,900	1,979	1,990	2,002	2,009	2,018
Real estate	1,157	1,213	1,216	1,246	1,189	1,230	1,246	1,254	1,261	1,281
Services	22,593	23,268	23,498	23,737	22,707	23,451	23,578	23,670	23,759	23,832
Business services	4,651.1	4,919.7	4,951.4	5,022.8	4,698	4,926	4,966	4,990	5,042	5,074
Health services	6,484.3	6,743.1	6,763.4	6,794.8	6,497	6,695	6,726	6,757	6,784	6,802
Government	17,013	16,896	17,176	17,286	16,699	16,890	16,928	16,918	16,904	16,966
Federal	2,908	2,888	2,895	2,909	2,923	2,899	2,907	2,914	2,915	2,924
State	4,029	3,947	4,076	4,107	3,927	3,965	3,983	3,983	3,984	4,003
Local	10,076	10,061	10,205	10,270	9,849	10,026	10,038	10,021	10,005	10,039

p = preliminary

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Mar. 1986	Jan. 1987	Feb. 1987p	Mar. 1987p	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987p	Mar. 1987p
Total private	34.7	34.4	34.5	34.6	34.9	34.8	34.6	34.8	35.0	34.8
Mining	42.3	42.8	42.1	41.8	(2)	(2)	(2)	(2)	(2)	(2)
Construction	36.4	37.3	36.9	37.5	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.7	40.8	40.8	40.9	40.7	40.8	40.8	41.0	41.2	40.9
Overtime hours	3.4	3.5	3.5	3.6	3.4	3.5	3.5	3.6	3.6	3.7
Durable goods	41.4	41.5	41.4	41.6	41.4	41.4	41.3	41.6	41.9	41.6
Overtime hours	3.5	3.6	3.6	3.7	3.6	3.6	3.6	3.7	3.7	3.8
Lumber and wood products	40.0	40.0	40.4	40.6	40.2	40.7	40.4	40.7	41.1	40.8
Furniture and fixtures	39.2	39.6	39.3	39.6	39.4	39.6	39.6	40.2	40.1	39.8
Stone, clay, and glass products	41.5	41.7	41.8	42.1	41.9	41.9	42.1	42.9	43.1	42.5
Primary metal industries	42.1	42.6	42.8	42.8	41.9	42.4	42.5	42.7	42.8	42.7
Blast furnaces and basic steel products	41.8	42.3	42.5	42.4	41.7	42.5	42.7	42.8	42.4	42.3
Fabricated metal products	41.4	41.4	41.3	41.5	41.4	41.4	41.1	41.5	41.8	41.5
Machinery, except electrical	41.8	42.0	42.0	42.1	41.6	41.7	41.5	42.0	42.1	41.9
Electrical and electronic equipment	41.1	41.1	41.0	40.9	41.0	41.0	41.0	41.0	41.4	40.8
Transportation equipment	42.8	42.5	42.5	42.8	42.7	42.3	42.1	42.3	42.8	42.7
Motor vehicles and equipment	43.4	43.2	43.0	43.3	43.3	42.6	42.6	43.2	43.5	43.2
Instruments and related products	41.4	41.2	41.2	41.4	41.3	41.2	41.3	41.2	41.4	41.3
Miscellaneous manufacturing	39.9	39.5	39.2	39.5	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	39.7	40.0	39.9	40.0	39.8	40.1	40.1	40.1	40.4	40.1
Overtime hours	3.1	3.4	3.3	3.4	3.2	3.5	3.5	3.5	3.5	3.5
Food and kindred products	39.4	39.8	39.3	39.5	39.9	40.0	39.8	40.0	40.1	40.0
Tobacco manufactures	37.5	37.4	36.5	39.2	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	40.6	41.6	41.8	41.9	40.7	41.5	41.9	41.7	42.3	42.0
Apparel and other textile products	36.5	36.8	37.1	37.0	36.5	36.9	37.0	36.9	37.6	37.0
Paper and allied products	43.3	43.5	43.1	43.1	43.5	43.2	43.4	43.6	43.6	43.3
Printing and publishing	38.1	37.7	37.9	38.0	38.0	38.1	38.1	38.0	38.3	37.9
Chemicals and allied products	42.0	42.3	42.0	42.0	41.9	42.5	42.2	42.3	42.1	41.9
Petroleum and coal products	43.7	44.7	43.5	43.9	43.8	43.8	43.6	45.0	44.2	44.0
Rubber and miscellaneous plastics products	41.3	41.6	41.5	41.6	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	36.3	37.3	37.2	37.5	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	39.4	38.7	39.0	39.1	39.6	39.3	39.0	39.1	39.3	39.3
Wholesale trade	38.3	38.1	38.0	38.1	38.5	38.3	38.2	38.3	38.4	38.3
Retail trade	28.9	28.4	28.7	28.8	29.3	29.3	28.9	29.0	29.4	29.2
Finance, insurance, and real estate	36.7	36.5	36.5	36.4	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.4	32.2	32.3	32.2	32.5	32.5	32.4	32.4	32.5	32.3

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[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Mar. 1986	Jan. 1987	Feb. 1987 p	Mar. 1987 p	Mar. 1986	Jan. 1987	Feb. 1987 p	Mar. 1987 p
Total private	$8.73	$8.88	$8.89	$8.90	$302.93	$305.47	$306.71	$307.94
Seasonally adjusted	8.73	8.84	8.86	8.89	304.68	307.63	310.10	309.37
Mining	12.35	12.67	12.52	12.51	522.41	542.28	527.09	522.92
Construction	12.22	12.53	12.45	12.57	444.81	467.37	459.41	471.38
Manufacturing	9.72	9.83	9.84	9.85	395.60	401.06	401.47	402.87
Durable goods	10.30	10.38	10.39	10.39	426.42	430.77	430.15	432.22
Lumber and wood products	8.33	8.29	8.32	8.28	333.20	331.60	336.13	336.17
Furniture and fixtures	7.35	7.57	7.56	7.57	288.12	299.77	297.11	299.77
Stone, clay, and glass products	9.93	10.18	10.16	10.17	412.10	424.51	424.69	428.16
Primary metal industries	11.99	11.86	11.89	11.91	504.78	505.24	508.89	509.75
Blast furnaces and basic steel products	13.80	13.67	13.70	13.69	576.84	578.24	582.25	580.46
Fabricated metal products	9.88	9.98	9.98	9.99	409.03	413.17	412.17	414.59
Machinery, except electrical	10.58	10.61	10.65	10.69	442.24	445.62	447.30	450.05
Electrical and electronic equipment	9.62	9.86	9.85	9.86	395.38	405.25	403.85	403.27
Transportation equipment	12.90	12.98	12.95	12.95	552.12	551.65	550.38	554.26
Motor vehicles and equipment	13.66	13.67	13.60	13.61	592.84	590.54	584.80	589.31
Instruments and related products	9.41	9.62	9.65	9.60	389.57	396.34	397.58	397.44
Miscellaneous manufacturing	7.51	7.70	7.69	7.67	299.65	304.15	301.45	302.97
Nondurable goods	8.88	9.06	9.06	9.09	352.54	362.40	361.49	363.60
Food and kindred products	8.74	8.89	8.91	8.94	344.36	353.82	350.16	353.13
Tobacco manufactures	12.76	12.89	13.35	13.76	478.50	482.09	487.28	539.39
Textile mill products	6.86	7.13	7.13	7.16	278.52	296.61	298.03	300.00
Apparel and other textile products	5.80	5.89	5.89	5.90	211.70	216.75	218.52	218.30
Paper and allied products	11.03	11.17	11.18	11.15	477.60	485.90	481.86	480.57
Printing and publishing	9.90	10.14	10.16	10.17	377.19	382.28	385.06	386.46
Chemicals and allied products	11.78	12.17	12.20	12.26	494.76	514.79	512.40	514.92
Petroleum and coal products	14.22	14.40	14.35	14.56	621.41	643.68	625.66	639.18
Rubber and miscellaneous plastics products	8.72	8.87	8.84	8.85	360.14	368.99	366.86	368.16
Leather and leather products	5.86	6.03	5.97	6.04	212.72	224.92	222.08	226.50
Transportation and public utilities	11.62	11.73	11.79	11.78	457.83	453.95	459.81	460.60
Wholesale trade	9.33	9.49	9.55	9.51	357.34	361.57	362.90	362.33
Retail trade	6.03	6.07	6.06	6.05	174.27	172.39	173.92	174.24
Finance, insurance, and real estate	8.30	8.58	8.71	8.68	304.61	313.17	317.92	315.95
Services	8.18	8.36	8.40	8.40	265.03	269.19	271.32	270.48

[1] See footnote 1, table B-2.

p = preliminary.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Mar. 1986	Jan. 1987	Feb. 1987p	Mar. 1987p	Percent change from: Mar. 1986-Mar. 1987	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987p	Mar. 1987p	Percent change from: Feb. 1987-Mar. 1987
Total private nonfarm:												
Current dollars	168.5	171.3	171.8	171.8	2.0	168.5	170.8	170.6	170.7	171.4	171.8	0.3
Constant (1977) dollars	95.2	94.8	94.7	N.A.	(2)	95.0	95.3	95.0	94.4	94.4	N.A.	(3)
Mining	180.1	182.0	180.5	181.0	.5	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	148.3	152.0	151.0	152.6	2.8	149.2	154.0	153.9	151.7	151.0	153.5	1.6
Manufacturing	171.9	174.1	174.2	174.3	1.4	171.8	173.2	173.5	173.4	173.9	174.1	.1
Transportation and public utilities	169.8	172.1	173.2	172.8	1.8	170.2	171.2	171.2	171.5	172.5	173.0	.3
Wholesale trade	171.9	174.9	175.8	175.3	2.0	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	157.7	158.8	159.1	159.1	.9	157.4	159.3	159.3	158.4	158.6	158.8	.1
Finance, insurance, and real estate	179.2	184.7	187.4	187.0	4.3	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	174.0	178.0	178.8	178.9	2.8	174.0	176.6	175.8	176.9	178.1	178.9	.4

1 See footnote 1, table B-2.
2 Percent change is 0.1 percent from February 1986 to February 1987, the latest month available.
3 Percent change is less than .05 percent from January 1987 to February 1987, the latest month available.
4 These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
N.A. Data not available.
p = preliminary.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Mar. 1986	Jan. 1987	Feb. 1987p	Mar. 1987p	Mar. 1986	Nov. 1986	Dec. 1986	Jan. 1987	Feb. 1987p	Mar. 1987 p
Total	114.9	116.4	116.8	117.7	11[illegible].4	119.3	119.0	119.9	120.9	120.4
Goods-producing	95.8	96.4	95.8	96.8	98.5	98.6	99.0	100.4	101.0	99.8
Mining	92.8	81.0	79.7	79.4	95.0	81.1	81.4	81.0	81.8	81.2
Construction	112.4	121.5	116.1	120.3	126.6	131.8	132.2	139.9	138.6	135.5
Manufacturing	92.7	92.3	92.6	93.1	93.3	93.3	93.4	93.6	94.6	93.8
Durable goods	91.6	89.9	90.3	90.9	91.7	90.6	90.5	90.9	91.9	91.2
Lumber and wood products	95.3	98.4	100.0	100.8	98.6	103.3	103.2	104.1	105.6	104.4
Furniture and fixtures	104.2	107.2	106.5	108.1	104.4	106.3	106.5	108.4	108.4	108.1
Stone, clay, and glass products	83.7	83.3	83.4	85.3	87.4	86.7	87.7	89.7	90.7	89.1
Primary metal industries	66.4	62.0	63.3	64.2	65.6	62.6	62.9	61.9	63.3	63.5
Blast furnaces and basic steel products	54.2	47.4	49.6	50.5	53.6	49.3	49.5	47.9	49.6	50.0
Fabricated metal products	89.8	88.5	88.3	88.9	90.2	89.0	88.8	89.4	90.0	89.3
Machinery, except electrical	90.3	85.5	86.7	87.2	89.3	85.1	84.6	85.6	86.6	86.3
Electrical and electronic equipment	103.3	103.0	102.2	102.2	102.9	102.9	102.9	102.5	103.4	101.6
Transportation equipment	97.8	96.2	96.9	96.9	97.1	96.3	95.6	95.5	97.4	96.4
Motor vehicles and equipment	88.8	84.9	85.9	85.1	88.4	84.6	84.1	85.1	87.1	84.7
Instruments and related products	106.4	103.4	103.2	104.0	106.1	103.9	104.5	103.4	104.2	103.9
Miscellaneous manufacturing	80.9	79.2	80.0	81.8	81.8	81.3	82.5	83.0	83.4	83.1
Nondurable goods	94.3	96.0	96.1	96.4	95.7	97.2	97.6	97.7	98.5	97.8
Food and kindred products	92.6	96.1	94.6	94.7	98.4	100.6	100.1	100.6	101.1	100.7
Tobacco manufactures	78.5	81.2	76.1	76.2	85.4	78.9	78.4	79.1	79.1	82.0
Textile mill products	77.2	81.1	81.9	82.4	77.8	80.7	81.7	81.7	83.5	83.1
Apparel and other textile products	85.9	85.7	87.2	86.8	85.4	86.4	87.6	87.1	88.2	86.6
Paper and allied products	101.3	102.5	101.6	101.5	102.0	102.7	103.7	103.4	103.6	102.3
Printing and publishing	128.2	129.5	130.5	131.5	127.4	130.2	130.8	131.1	132.0	130.6
Chemicals and allied products	93.6	93.0	93.5	93.6	93.4	94.6	93.4	93.9	93.8	93.4
Petroleum and coal products	78.5	78.9	77.4	79.3	80.4	79.6	79.3	81.8	81.2	80.8
Rubber and miscellaneous plastics products	112.8	114.6	115.1	116.2	112.7	114.8	115.2	115.3	116.5	116.1
Leather and leather products	58.5	57.4	57.6	58.3	60.9	57.5	58.9	59.2	60.6	60.5
Service-producing	125.5	127.4	128.3	129.3	127.8	130.7	130.1	130.7	132.0	131.7
Transportation and public utilities	106.1	106.0	107.0	108.1	108.2	108.6	108.2	108.7	109.5	110.1
Wholesale trade	118.3	118.1	117.7	118.1	120.1	119.5	119.2	119.6	120.0	119.8
Retail trade	113.7	116.0	116.0	116.9	118.4	120.8	119.2	120.1	122.3	121.7
Finance, insurance, and real estate	134.4	139.6	140.2	140.8	135.6	141.1	140.7	141.3	141.8	142.3
Services	142.5	144.8	146.9	148.1	143.5	147.9	148.2	148.4	149.7	149.1

[1] See footnote 1, table B-2.

p = preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1985	52.4	47.8	53.8	49.2	51.6	47.0	56.2	56.8	50.8	61.9	57.6	59.5
	1986	59.7	53.5	45.1	54.1	49.2	46.2	54.6	54.3	54.9	55.1	62.7	62.4
	1987	51.6	p63.0	p49.7									
Over 3-month span	1985	51.1	49.7	46.2	46.2	45.1	51.4	49.7	51.1	55.1	55.9	61.4	60.5
	1986	58.1	54.3	51.1	49.7	48.4	44.9	47.3	54.1	54.9	62.4	65.1	63.0
	1987	p62.7	p57.3										
Over 6-month span	1985	49.2	47.8	43.0	45.9	44.3	44.3	48.9	50.8	54.1	57.0	57.0	55.9
	1986	53.8	53.8	47.6	45.9	45.9	48.6	49.7	55.4	61.1	60.5	p63.5	p60.8
	1987												
Over 12-month span	1985	46.2	45.7	46.8	43.8	44.9	47.3	47.6	48.9	47.3	49.5	48.9	48.6
	1986	50.3	51.1	52.2	52.4	52.7	54.6	53.5	p55.1	p55.9			
	1987												

[1] Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

p = preliminary.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.

Senator SARBANES. Thank you very much, Commissioner.

I have a couple of almost technical questions at the outset.

The overall unemployment rate includes the military as being in the work force and as employed, is that correct?

Mrs. NORWOOD. That's correct.

Senator SARBANES. And then the civilian rate, of course, excludes them. That's the essential difference?

Mrs. NORWOOD. Yes.

Senator SARBANES. I notice that they differ by a tenth of a point this month and my recollection is that that has been about the difference—well, let me ask the question without recollecting. What has the difference been between those two rates since you made that change—which was, what, about 2 years ago?

Mrs. NORWOOD. Yes. Generally, the civilian rate is a tenth higher than the overall rate, including the Armed Forces. Once in a while, there may be a two-tenths difference, but that's due to rounding differences. There generally is a one-tenth difference between the two rates.

Senator SARBANES. Between overall and civilian?

Mrs. NORWOOD. Yes.

Senator SARBANES. I've been looking at the level of long-term unemployment and according to the figures we've been looking at there are more than 2 million who have been unemployed for 15 weeks or longer.

Mrs. NORWOOD. Yes.

Senator SARBANES. And more than half of them—in other words, something over a million—have been unemployed for 27 weeks or longer.

Mrs. NORWOOD. Yes.

Senator SARBANES. My first question is, are these figures uncharacteristic, and in effect very high for this stage of a recovery period?

Mrs. NORWOOD. They are much higher than they were this number of months after the recession in the 1970's. Of course they had been considerably higher right after the 1981-82 recession. They were about double what they are now. So they have come down considerably since the recession, but they are higher than they were before the recession.

Senator SARBANES. According to our calculation, if you look at the long-term unemployed as a percentage either of the labor force or of the total number of unemployed, you really have to go back quite far to find a comparable situation. As we calculate it, currently 26 percent of the unemployed have been out of work for 15 weeks or more. In other words, more than a quarter have been out of work for more than 15 weeks and our historical survey would indicate that we have to go back to the recession of the early 1970's and the recession at the end of the Eisenhower years to find long-term unemployment as severe as it is today.

Would that be correct?

Mrs. NORWOOD. I haven't made those calculations, but it would not surprise me. We can go over them, but that sounds about right.

Senator SARBANES. Let me turn then, having focused on this aspect of the problem, to the number of the unemployed covered by unemployment insurance.

What we see is a sharp drop in the percentage covered by unemployment insurance, compared to the past situations. In fact, I think the figure is now down to about 30 percent of the unemployed. Would that be correct?

Mrs. NORWOOD. Well, if we look at actual unemployment insurance claimants as a percentage of total unemployment in our survey, it's 37 percent.

Senator SARBANES. 37 percent?

Mrs. NORWOOD. Yes. It's gone up slightly.

Senator SARBANES. How does that compare with past periods?

Mrs. NORWOOD. It's considerably lower coverage than occurred early in the 1980's and very much lower than in the 1970's. The rate of coverage in May 1975 was 67.2 percent. It's now 37.1 percent.

Senator SARBANES. And what explains that?

Mrs. NORWOOD. I'm not sure. Some of it may be changes that have occurred in the administration of the laws by the States. Many States have reviewed their procedures to ensure proper eligibility. So there may be some effect there, but it's unmeasureable, at least with the data that we have.

Second, we did have a recession in 1980 and then another steep recession in 1981-82. There were two back-to-back recessions. Some people say this was just one. In any case, there are many people who lost their jobs and probably used up their eligibility.

So I think there were several reasons. I might add also that I have—as I've explained to this committee before—some concerns about the use of the UI data as a statistical data base. It's a very good administrative data base, but there are variations in procedures from one local area to another which make it difficult to look at the statistical validity of the data.

Senator SARBANES. That leads right into my next question. Let me put a question to you on that point because I'm concerned about some very sharp variations. Even accepting the point you've just made on the statistical validity, it seems to me the discrepancy is so great that there's a bigger problem.

We took a look at the trigger notice dated March 31, which gives each State's current insured unemployment rate, and compared that with the State's total unemployment rate. One of the things we were struck by—we being the staff of the committee that's been doing some work on this—was the wide variation among the percent of each State's unemployed that are covered by unemployment insurance.

Mrs. NORWOOD. Yes.

Senator SARBANES. We've just established the point that looking at it nationally there's been a vary sharp drop in the percent of the unemployed covered by unemployment insurance, from 67 percent in I think it was the mid-1970's to 37 percent today. So we've gone from roughly two-thirds to one-third—not quite.

Now if you do it on a State-by-State basis, you have very wide variations. For example, slightly less than half the unemployed in Maryland appear to be covered by unemployment insurance compared to almost 90 percent in Rhode Island and less than 30 percent in Texas.

So my question is, What accounts for these State-by-State variations in the percent of total unemployment covered by unemployment insurance?

Mrs. **Norwood**. There are at least two explanations and there may be many others.

One is that there are different administrative requirements State by State. That's one of the reasons that in the calculation of local area unemployment estimates our Bureau has found it necessary to use data from the Current Population Survey to try to get all States on the same definitional plane. So that's one of the problems.

The second problem, of course, is that there's a big difference in the coverage for people who have lost a job and for people who have just entered or reentered the labor force, perhaps having used up eligibility before or perhaps not having had any. The ratio of unemployment compensation claimants to job loses is almost 70 percent. That is still less than the proportion in the 1970's, when it was nearly 100 percent, but there may be, and probably are, some variations from one State to another in the proportions of entrants and reentrants compared to job losers within the State.

Senator **Sarbanes**. Well, my time is up.

Congressman McMillan.

Representative **McMillan**. Pursuing a little bit the current level of unemployment, it strikes me that this expansion, unlike most in the post-World War II period, I believe it's correct to say is the second longest sustained expansion since World War II or in the post-World War II period, has been characterized by something that the Congress is attempting to address right now that has to do with the import problem.

And it strikes me that it has been a very strong performance for the economy to achieve the unemployment levels that we have achieved when we all know that there are heavy pockets of secular unemployment caused by import problems which, as we all know, have grown to record proportions in the past 2 to 3 years.

Do you have any data to indicate to what degree the current unemployment level is impacted by the import problem or is it simply too complex to develop that kind of information?

Mrs. **Norwood**. I believe it is too complex to develop a direct causal relationship. We import things into this country because they are cheaper or perhaps because consumers find them more desirable. If we were to produce those items, the factors of production would shift completely and we really don't know any way to develop any effective statistical mechanism for measuring them.

I think the most that we can do is what has been done in a variety of reports—and the International Trade Commission has done a good deal of work in this area—is to try to look at the obvious places. We've seen a lot in the news about the electronic chip industry. We talk about automobiles and so on.

One of the major problems, of course, is the effect of imports on prices and the kinds of reaction to import competition that our domestic producers producing for export take. That can have a very big effect on our export volume.

Represenative **McMillan**. Well, it has been my experience, looking at the State of North Carolina and my own district, I believe the figures this month confirm that the unemployment rate in North Carolina dropped. My own district has among the lowest unemployment rates in the country and yet we've lost close to 10,000 textile-related jobs in that district over the past 6 years.

It speaks well for the general health of the economy in this expansion in terms of its capacity to create jobs. It perhaps would be interesting to consider doing some studies of particularly well-documented impacted industries to see what in fact has occurred with respect to the former textile employees or perhaps other industries as steel to see what they have done to recover.

Mrs. NORWOOD. Congressman, I believe that such studies, if they were done, really would be extremely difficult and I think quite expensive. What is really needed is—as you say, the textile industry, for example—would be to look at the response in terms of technology, in terms of price, in terms of marketing, that is taken by individual firms to the competition, whether the competition comes from imports or from the domestic market, and then assess the viability of the industry.

It seems to me that what we are seeing in many cases, particularly in the textile industry, has been a reaction to competition. As we find obsolete plants or plants with old technology facing competition, sometimes those plants close down and sometimes they are refurbished. But even in the textile industry, we are finding new plants coming into existence. Those plants are usually very efficient plants.

I just don't think that one can do some sort of aggregate study to look at those issues and it would be an extremely difficult job to do comprehensive studies by industry. It would require personal visits.

We are trying to look at some of the technological change in some industries. We have added a few questions as a pilot to our industry wage surveys to see whether we can identify any changes. But it has been many years since the Bureau of Labor Statistics had a problem to actually send data collectors out to plants to do real surveys of new technology and I think that's what would be required.

Representative MCMILLAN. Well, I will admit it's difficult because often aggregate figures tend to mask the problem and therefore don't provide any clear indications as to potential solutions. Just using the phrase textile industry as if it were one industry and that a given participant in the industry can modify their product mix or their equipment with any ease, some elements of the industry may be doing extremely well while others are severely impacted.

Mrs. NORWOOD. That's right.

Representative MCMILLAN. And I think it's really that issue of masking performance that troubles me a little bit about simply viewing unemploymnent rates in the aggregate for the Nation, ignoring the fact that in the longest expansion in the post-World War II period, despite heavy impact that we would generally acknowledge has occurred because of imports, we have had perhaps one of the longest sustained periods of new job creation that we've experienced.

On that note, could you characterize—because claims have been made that we've created 12 million new jobs in the 53 months of this expansion—how that rate of job creation might compare with other expansions in the post-World War II period?

Mrs. NORWOOD. It has been extremely vigorous. In the 1970's we created about 13 million jobs during the same period of recovery—that is 52 months after the trough of the recession. We have created a little over 12 million jobs in this recovery.

So both of them have been extremely strong. The period of the 1970's was a little bit stronger than now.

Representative MCMILLAN. Would the same be true basically in terms of the employment-population ratios?

Mrs. NORWOOD. The unemployment-population ratio is extraordinarily high now. It reached an all-time high last month at 60.2 percent. It has gone down a tenth of a point, but it is extraordinarily high. Last month was an all-time high and this one is an all-time high except for last month. So it is very high.

Representative MCMILLAN. And compared with the 1970's, how would that compare roughly?

Mrs. NORWOOD. It's much higher. It's approximately the same rate of increase during the two recoveries—that is, the one in the 1970's and now—but we started in the 1980's from a higher level of employment. Employment-population ratios started at a higher level.

So clearly there are more people working as a proportion of the population than in the past. That's quite true.

Representative MCMILLAN. I think my time is up, Mr. Chairman. Thank you.

Senator SARBANES. Senator Proxmire.

Senator PROXMIRE. Commissioner, your statement emphasized that the 6.6 percent unemployment rate of March was little changed from February. Would you say that the one-tenth percent improvement was mainly due to rounding the rate to 1 decimal point?

Mrs. NORWOOD. There is some rounding in it, but the unemployment rate has to change by almost two-tenths of a percentage point in order for the change to be statistically significant over a single month.

Of course, over a period of time, a succession of tenths can accumulate and become significant. But that's why I said that the unemployment rate was about the same.

Senator PROXMIRE. Well, I notice in your household data tabulation you show an actual decline in the total employed between February and March, seasonally adjusted. It dropped from 113,122,000 to 113,104,000. It's a small drop, but it's a drop. Isn't that right?

Mrs. NORWOOD. Yes, but it's not a statistically significant drop.

Senator PROXMIRE. Well, the reason apparently that unemployment improved was because the labor force dropped and the number of people working dropped.

Mrs. NORWOOD. Yes.

Senator PROXMIRE. Now the March household survey shows an increase in the number of discouraged workers in the first quarter. How do you interpret that? Isn't it unusual for the number of discouraged workers to increase during a period of economic growth?

Mrs. NORWOOD. The number of discourage workers is about the same as in the previous quarter I believe. It's 1,168,000 and in the previous quarter it was 1,127,000. So there is really no significant difference.

Senator PROXMIRE. Now the diffusion index—that's one we've had fun with in the past and it's a pretty good index because I understand that that indicates the proportion of industries that actually increased employment compared to those who have lost employment.

What happened in 1 month's time to cause that drop? It dropped from 63 percent in February to 49.7 percent in March. In view of the fact that there wasn't much of a change, by and large, in the statistics, that diffusion index is pretty spectacular.

Would you interpret that decline as a sign that the economy is weakening?

Mrs. NORWOOD. The diffusion index is heavily weighted toward manufacturing. Manufacturing employment from February to March was quite weak and the diffusion index is showing that.

Nevertheless, almost 50 percent is still not cause for panic.

Senator PROXMIRE. Well, we usually say that the industrial sector is in trouble when the diffusion index falls below 50 percent. It's not much below 50 percent, as you say, but it is below it. Does that mean that the industrial sector, the manufacturing sector, faces a weak spring?

After all, it was a big drop.

Mrs. NORWOOD. It's quite clear that employment in durable goods manufacturing in particular is weak. On the other hand, a lot will depend on whatever the response is in the volume of export sales. That will depend in large part on price relationships and also on how that might translate or not translate into employment.

The employment growth that we are seeing and that we have been seeing for many years now is largely focused in the service-producing sector, as we have discussed many times.

Senator PROXMIRE. Now the payroll employment figures for each of the first 2 months of the year were revised down by more than 100,000. This month you show no growth in employment when measured by the household survey, but the payroll survey shows a growth of 165,000.

Do you believe that this month's payroll employment growth might be another overestimate and you will shortly have to revise the figures downward?

Mrs. NORWOOD. Well, you will recall, Senator, that when I was here in the previous couple of months I emphasized some concern about the retail trade figure. I said that I thought that might be an exaggeration. It actually was something of an exaggeration when we got full reports in. That's where the problem was.

Retail trade is up only slightly now, 36,000 this month. So I don't see any really serious problem there.

Another area that we have some concern about is in government, which seems to be very difficult to measure, but the total private has still gone up. So I don't think that's a problem.

Senator PROXMIRE. As you know, Members of Congress are especially sensitive to the regional changes.

Mrs. NORWOOD. Yes.

Senator PROXMIRE. And we have some regions of the country that are dominated by energy production or by agricultural production which have suffered a great deal. We notice that especially in the banking industry and in other areas.

Can you give us a quick résumé—it's hard for me to interpret your figures because I don't understand the acronyms. They seem to be contradictory. At any rate, give me a brief résumé by what the six or eight or nine regions that you have, whether unemployment is up or down?

Mr. Plewes. This will take a minute because we don't have the columns lined up exactly, but taking a look just over the past year, for example, from March 1986 to March 1987, and take a look at the unemployment experienced in each of the regions, in the Northeast region the unemployment rate has gone down by 1.2 percentage points.

Senator Proxmire. That's probably the most prosperous part of the country.

Mr. Plewes. Yes, sir. It surely is. In the Middle Atlantic area, the unemployment rate went down by 16 percentage points. The East-North Central area unemployment rate was down about six-tenths.

Senator Proxmire. That includes Wisconsin?

Mr. Plewes. That includes Wisconsin, Michigan, Illinois, Iowa, and Indiana.

Senator Proxmire. Six-tenths down?

Mr. Plewes. Six-tenths down. Not as much as the Northeast but the direction is down. Going through some other areas, in the farm areas, West-North Central area, eight-tenths down, starting from reasonably low levels actually, but eight-tenths down. In the South Atlantic region, two-tenths down. That's the North Carolina, South Carolina, Virginia areas down to Georgia and Florida. In the Kentucky, Tennessee area, the East-South Central, down 1.5 percent.

In the West-South Central—that's the area hit by the oil and gas problems—Arkansas, Louisiana, Oklahoma, and Texas—up two-tenths of a percent. Most of their increase was prior to this year, but it's still up two-tenths.

Senator Proxmire. So that area, Oklahoma and so forth, they're worse off now than they were?

Mr. Plewes. That's correct.

The Mountain Area in the West, that's also impacted—Wyoming, Colorado, New Mexico, down in Nevada and in that area, up nine-tenths, again fairly largely through mining—losses in both metal mining and oil and gas extraction.

Senator Proxmire. When you say "up," you mean unemployment?

Mr. Plewes. Unemployment is up nine-tenths of a percentage point on average in that region.

The Pacific region is down—California, Hawaii, Washington, Oregon, and Alaska—down eight-tenths percent.

Senator Proxmire. So it sounds as if the healthier are getting healthier and the sicker are getting sicker.

Mr. Plewes. That's correct. And I think if we could characterize it right now, we have problems in oil and gas and mining that affect certain areas. We have problems in farming, in agriculture, that are affecting that area. And we have continued problems, of course, in some of the manufacturing industries that affect certain areas.

Senator PROXMIRE. I think maybe I have time for one more question.

This month you reported that we lost 68,000 jobs in the goods-producing sector. I find that rather startling because it was reported that the operating rate of the Nation's factories had begun to rise to 79.8 percent in February. New orders for manufactured goods rose 4.3 percent in February. Inventories lowered in the last quarter of 1986 should probably need rebuilding.

Can you explain why goods-producing employment should drop so dramatically?

Mrs. NORWOOD. Well, as you well know, Senator, the fact that employment goes down does not always have a relationship to output. Output in manufacturing has held up much more firmly than has employment in manufacturing.

Senator PROXMIRE. Well, that's hard to understand. I would think that as production goes up jobs go up, as production goes down jobs go down. Why not?

Mrs. NORWOOD. Well, there are two things going on. One is new technology, of course, and the other is the distinct effort by employers to become more competitive. Labor costs are quite high and they are paying a great deal of attention to trying to reduce labor costs and to get as much production as they can by using capital equipment and workers more effectively and more efficiently.

So we are finding in the newspaper almost every week some indication by large corporations of reductions in their work force without necessarily affecting the output of those factories.

Senator SARBANES. We have a rollcall. I think we are in a position to adjourn the hearing, but Congressman McMillan wanted some answers to some questions as I understand it.

Representative MCMILLAN. I have some questions with respect to drawing a historical and a profile of people at the minimum wage level classifications by age, part time, head of household, joint head of household, which I would like to pursue with in writing, Mrs. Norwood, if that would be permissible, Mr. Chairman.

Senator SARBANES. Certainly.

Representative MCMILLAN. Thank you very much.

Senator SARBANES. Commissioner, I thank you and your associates very much. We appreciate you appearing before us.

The committee stands adjourned.

[Whereupon, at 10:10 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, MAY 8, 1987

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:35 a.m., in room SD-628, Dirksen Senate Office Building, Hon. Paul S. Sarbanes (chairman of the committee) presiding.

Present: Senator Sarbanes and Representative Wylie.

Also present: William R. Buechner and Christopher J. Frenz, professional staff members.

OPENING STATEMENT OF SENATOR SARBANES, CHAIRMAN

Senator SARBANES. The Joint Economic Committee will come to order.

We are pleased again to welcome Commissioner Janet Norwood for her testimony this morning on the employment and unemployment figures for April 1987.

This is one in a continuing series of such hearings that this committee has held and we are very pleased to have Commissioner Norwood back before us.

I am going to depart from the usual statement that the chairman makes on the unemployment figures when we hold these monthly hearings and take a moment to say that since Commissioner Norwood's last appearance before us we have received the very welcome news that President Reagan has nominated her to be the Commissioner for a third term as the head of the Bureau of Labor Statistics.

Commissioner Norwood has had a very distinguished career; she has been a Bureau of Labor Statistics employee for almost a quarter of a century. Before her nomination to her first full term as Commissioner of Labor Statistics, she had served as Deputy Commissioner for 5 years, from October 1973 to April 1978, and as Acting Commissioner from April 1978, following the death of Commissioner Julius Shiskin, to May 1979.

She then got her first 4-year term. She was reappointed to a second 4-year term in 1983, and she's now been nominated—and I have every confidence will be confirmed—to a third 4-year term.

Throughout her nearly 25-year career at the BLS, she's unfailingly adhered to the highest professional standards of competence and integrity, and her pending reappointment is a most welcome development.

I have talked to the leadership of the Labor and Human Resources Committee. I gather they hope to act on this nomination in the next few weeks.

So, Commissioner, I simply say congratulations and we are very pleased about this nomination for your further reappointment, and we are very pleased to welcome you once again before the committee.

Mrs. NORWOOD. Thank you very much.

Senator SARBANES. Congressman Wylie.

OPENING STATEMENT OF REPRESENTATIVE WYLIE

Representative WYLIE. Mr. Chairman, it gives me a great deal of pleasure to welcome Commissioner Norwood here this morning and I, too, would like to congratulate her on her nomination and certainly voice my strong support. She has become a real expert in her field and is looked to for advice and guidance in the area of employment and unemployment.

I see this morning that the Commissioner brings us very good news indeed, that there is a sharp three-tenths of a percentage point decline in the civilian unemployment rate and that its level is down to 6.3 percent. I think that's probably the lowest rate since way back in 1980, if I read my figures correctly. But it seems as if this increased employment is across the board and I would just make the observation that over the course of the upswing almost 13 million jobs have been created, if I read your report correctly, and this is the longest economic recovery I think for a long time. But we are clearly it seems moving in the right direction, but I want to hear from you and I look forward to your testimony.

Thank you very much, Mr. Chairman.

Senator SARBANES. Commissioner, we would be pleased to hear from you.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS

Mrs. NORWOOD. Thank you. Mr. Dalton is on my right and Mr. Plewes is on my left.

We are always very, very pleased to be here to supplement the press release.

Unemployment fell sharply in April, and employment growth was quite strong. Both the overall and the civilian jobless rates declined three-tenths of a percentage point—to 6.2 and 6.3 percent, respectively. In addition, both the household and the business surveys recorded healthy job growth.

Jobless rates declined for most worker groups. The rates for adult men and women dropped three-tenths of a point to 5.5 percent. Unemployment rates for men and women have been quite similar for some time now and identical for the last 2 months. This shift away from the historical pattern of a higher rate for women than for men, especially in a recovery period, is an interesting one.

During the late 1970's, for example, the rate for women generally exceeded the rate for men by 1½ to 2 percentage points. In the 1980's, however, the male unemployment rate rose steeply during the recession. Partly because of the industrial restructuring that has occurred, it has remained well above its historical level, whereas the unemployment rate for adult women is now back to 1979 levels. The adult male unemployment rate is still very much affected by the relative weakness of mining and of several key manufacturing industries. Women, on the other hand, have traditionally been more concentrated in some of the fast-growing service industries. The service-producing sector is now the primary source of increased jobs for both men and women. In addition, the trend has been for women to shift more and more into full-time, career-oriented employment. Their educational attainment has risen, and they have sharply reduced their movement out of the labor force as they have children.

Jobless rates for whites declined to 5.4 percent, and the rate for blacks dropped to 13.0 percent. Over the past year, the rate for blacks has fallen by nearly 2 percentage points. The proportion of the black population at work, while still well below the 62.1 percent for the white population, has risen from 54.3 to 54.7 percent. The unemployment rate for the Hispanic population—at 9.2 percent in April—was down from the 10.5 percent rate of a year ago, and their employment population ratio picked up by about 2 percentage points over the year.

Despite the decline in overall unemployment, there was no significant reduction in the number of jobless for 6 months or longer, or in the number of persons working part time for economic reasons. After 53 months of expansion in the labor market, there still are more than a million persons with very long-duration unemployment and another 5.4 million working part time when they want full-time jobs.

As I indicated earlier, both the household and the business surveys showed strong employment growth in April. In fact, since last September, both surveys have registered gains of about 1.8 million. The fastest growth over the year continued to take place in the relatively well-paid precision production, craft and repair occupations and in the managerial and professional specific occupations.

Growth in the business survey followed its now familiar pattern. Most of the 315,000 growth was in the service-producing sector. Services, the largest industry group, with almost one-fourth of all payroll jobs, accounted for 100,000 of the over-the-month gain. Finance, insurance and real estate continued strong, adding about 35,000 jobs, and retail trade rose by 65,000.

In the goods-producing sector, construction, which had experienced unusual seasonal patterns during the winter months, rose slightly on a seasonally adjusted basis. In mining, the long downward slide in employment seems to have bottomed out. Although there has been little increase in mining employment in recent months, we are no longer seeing the large and consistent job losses that occurred in the last 2 years.

Employment in manufacturing continued the lackluster performance of recent months, with little change occurring in April. The 15,000 job drop in the motor vehicles and equipment industry was due to a temporary layoff. The workers affected by that layoff are now back at work.

Although factory employment held steady in April, the average factory workweek declined by half an hour, and overtime declined by three-tenths of a hour. As a result, aggregate hours in manufacturing declined by 1.0 percent. Our experience shows, however, that these declines was probably associated with religious observance, both of which fell within the reference week.

In summary, the labor market in April was quite strong. Sizable job growth resumed, especially in the service-producing sector, and unemployment declined.

I would like to take a moment, Mr. Chairman, to comment briefly on the first quarter 1987 price data which suggest that the effects of the declining dollar are influencing the prices of consumer products. Prices paid by importers for commodities other than fuels, which has been rising since 1985, rose appreciably again during the first quarter of this year. In the CPI, a sharp turnaround in energy prices was the major cause of the 6.2 percent rise in the overall index during the first quarter of this year; the CPI had risen only 1.1 percent in all of 1986. Nevertheless, consumer prices for commodities other than food and energy also accelerated.

Many product areas that are heavily influenced by imports had substantial annual rates of increase in the first quarter, and I list a few examples—wine, apparel, and jewelry.

While one should not make too much of a single quarter's data, evidence that the dollar's decline is putting some upward pressure on domestic prices is beginning to accumulate. There is even some limited evidence that domestic producer prices may be responding to the advent of higher import prices. After rising 2.9 percent during 1986, the index for prices received by domestic producers of consumer goods other than food and energy rose at a somewhat more rapid annual rate of 3.7 percent during the first quarter. The evidence for price accelerations among domestic producers is very limited, but the large increases for such things as apparel and home electronics suggest that prices of domestically produced and import-sensitive commodities bear watching in the coming months.

Mr. Chairman, we would be glad to try to answer any questions.

[The table attached to Mrs. Norwood's statement, together with the press release referred to, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unad- justed rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1986									
April.......	7.0	7.1	7.1	7.1	7.2	7.1	7.1	7.1	.1
May.........	7.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	-
June........	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	-
July........	7.0	7.0	7.0	7.0	7.0	6.9	7.0	7.0	.1
August......	6.7	6.8	6.8	6.8	6.8	6.9	7.0	6.8	.2
September...	6.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	-
October.....	6.6	6.9	6.9	7.0	7.0	6.9	6.9	7.0	.1
November....	6.6	6.9	6.9	6.9	6.9	6.9	7.0	7.0	.1
December....	6.3	6.7	6.7	6.7	6.6	6.7	6.7	6.7	.1
1987									
January.....	7.3	6.7	6.7	6.7	6.7	6.8	6.6	6.7	.2
February....	7.2	6.7	6.7	6.6	6.6	6.7	6.5	6.7	.2
March.......	6.9	6.6	6.6	6.5	6.6	6.6	6.5	6.6	.1
April.......	6.2	6.3	6.3	6.3	6.4	6.3	6.3	6.3	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
May 1987

(1) *Unadjusted rate*. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) *Official procedure (X-11 ARIMA method)*. The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1975 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of *Employment and Earnings*.

(3) *Concurrent (as first computed, X-11 ARIMA method)*. The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1985 would be based, during 1985, on the adjustment of data from the period January 1975 through January 1985.

(4) *Concurrent (revised, X-11 ARIMA method)*. The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) *Stable (X-11 ARIMA method)*. Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) *Total (X-11 ARIMA method)*. This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) *Residual (X-11 ARIMA method)*. This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) *X-11 method (official method before 1980)*. The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in *The X-11 ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in *X-11 Variant of the Census Method II Seasonal Adjustment Program*, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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8:30 A.M. (EDT), FRIDAY,
MAY 8, 1987

THE EMPLOYMENT SITUATION: APRIL 1987

Unemployment declined in April and employment rose substantially, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall unemployment rate and the rate for civilian workers each were down three-tenths of a percentage point to 6.2 percent and 6.3 percent, respectively.

Total civilian employment--as measured by the monthly survey of households--rose by 470,000 in April, and nonagricultural payroll employment--as measured by the monthly survey of establishments--was up by 315,000. The two employment series have advanced by 2.8 and 2.5 million, respectively, over the past year.

Unemployment (Household Survey Data)

The number of unemployed persons declined by 350,000 in April to a seasonally adjusted level of 7.5 million. The civilian worker unemployment rate fell by 0.3 percentage point to 6.3 percent, matching the rates last reached in January-March of 1980.

Unemployment rates for virtually all labor force groups declined to their lowest levels for the current expansionary period. The rates for adult men and adult women each decreased by three-tenths of a point to 5.5 percent, while the rate for teenagers edged down to 17.4 percent. Jobless rates for both whites (5.4 percent) and blacks (13.0 percent) improved over the month, while the rate for Hispanics (9.2 percent) was about unchanged. (See tables A-2 and A-3.)

Most of the over-the-month decline in unemployment occurred among those jobless for less than 15 weeks. The average (mean) duration of unemployment was unchanged at 14.9 weeks, while median duration edged up to 7 weeks. (See table A-7.)

Civilian Employment and the Labor Force (Household Survey Data)

Civilian employment rose more than usual in April and, after adjustment for seasonality, advanced by 470,000 to 111.8 million. Adult women accounted for more than half of this increase. The proportion of the civilian population that was employed rose 0.2 percentage point to 61.3 percent. (See table A-2.)

The civilian labor force participation rate, at 65.4 percent, was unchanged in April. Over the past 12 months, the civilian labor force has

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Mar.-Apr. change
	1986	1987	1987			
	IV	I	Feb.	Mar.	Apr.	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/	120,308	120,943	121,089	120,958	121,070	112
Total employment 1/	112,170	112,995	113,122	113,104	113,570	466
Civilian labor force	118,558	119,202	119,349	119,222	119,335	113
Civilian employment	110,420	111,254	111,382	111,368	111,835	467
Unemployment	8,138	7,948	7,967	7,854	7,500	-354
Not in labor force	62,807	62,800	62,649	62,957	63,009	52
Discouraged workers	1,127	1,168	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	6.8	6.6	6.6	6.5	6.2	-0.3
All civilian workers	6.9	6.7	6.7	6.6	6.3	-.3
Adult men	6.1	5.9	5.9	5.8	5.5	-.3
Adult women	6.0	5.8	5.8	5.8	5.5	-.3
Teenagers	17.8	17.9	18.0	18.1	17.4	-.7
White	6.0	5.7	5.7	5.6	5.4	-.2
Black	14.1	14.2	14.3	13.9	13.0	-.9
Hispanic origin	10.2	9.7	9.6	9.0	9.2	.2
ESTABLISHMENT DATA	Thousands of jobs					
Nonfarm employment	101,072	p101,830	101,854	p102,009	p102,325	p316
Goods-producing	24,892	p25,017	25,038	p25,004	p25,046	p42
Service-producing	76,180	p76,813	76,816	p77,005	p77,279	p274
	Hours of work					
Average weekly hours:						
Total private	34.7	p34.9	35.0	p34.8	p34.7	p-0.1
Manufacturing	40.8	p41.1	41.3	p41.0	p40.5	p-.5
Overtime	3.5	p3.6	3.6	p3.7	p3.4	p-.3

1/ Includes the resident Armed Forces.

p=preliminary.

N.A.=not available.

grown by 2.0 million to 119.3 million persons. Adult women have accounted for three-fifths of this increase.

Industry Payroll Employment (Establishment Survey)

Total nonagricultural payroll employment rose by 315,000 in April. As usual, the increase was mostly among service-producing industries, where there was a gain of 275,000 jobs. Since April 1986, the industries in this sector have added over 2.5 million workers to its payrolls, accounting for practically all of the over-the-year job growth. (See table B-1.)

Jobs in the services industry increased by 105,000 in April, with almost half of the gain occurring in business and health services. Over 1 million jobs have been added in this industry during the past year. Retail trade also posted strong gains, increasing by about 65,000. Employment grew by 35,000 in the finance, insurance, and real estate industry, with finance alone rising by 20,000.

In the goods-producing sector, the construction industry posted a gain of about 25,000 jobs (seasonally adjusted). Manufacturing employment was little changed, as a decline in motor vehicles and equipment offset small but widespread gains elsewhere. Jobs in mining and its oil and gas extraction component have edged up over the last 3 months, in contrast to the large and steady losses of the prior 2 years.

Weekly Hours (Establishment Survey Data)

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls edged down 0.1 hour to 34.7, after seasonal adjustment. Weekly hours in manufacturing declined by 0.5 hour to 40.5 hours, and factory overtime declined by 0.3 hour to 3.4; both movements resulted from religious observances in the reference period. (See table B-2.)

Despite employment gains, declining hours caused the index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls to edge down 0.1 percent to 120.5 (1977=100) in April. This level was still 2.4 percent higher than a year earlier. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings were down 0.2 percent in April, and average weekly earnings declined by 0.5 percent, after adjustment for seasonality. Before seasonal adjustment, hourly earnings were unchanged at $8.89, while average weekly earnings were down 88 cents to $306.71. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 172.2 (1977=100) in April, seasonally adjusted, an increase of 0.3 percent from March. For the 12 months ended in April, the increase was 2.2 percent. The HEI excludes the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. In dollars of constant purchasing power, the HEI decreased 0.9 percent during the 12-month period ended in March. (See table B-4.)

Revisions in the Establishment Survey Data

The Employment Situation news release of data for May will introduce revisions in the establishment-based series on nonagricultural payroll employment, hours, and earnings to reflect the regular annual benchmark adjustments and updated seasonal adjustment factors.

The Employment Situation for May 1987 will be released on Friday, June 5, at 8:30 A.M. (EDT).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes 250,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. At the time the first half year's factors are calculated (upon availability of data for December), historical data for the previous 5-year period are subject to revision. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $4.50 per issue or $31.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Apr. 1986	Mar. 1987	Apr. 1987	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987
TOTAL									
Noninstitutional population[2]	181,843	183,915	184,079	181,843	183,297	183,575	183,738	183,915	184,079
Labor force[2]	118,012	120,089	120,082	118,987	120,336	120,782	121,089	120,958	121,070
Participation rate[3]	64.9	65.3	65.2	65.4	65.7	65.8	65.9	65.8	65.8
Total employed[2]	109,896	111,965	112,776	110,664	112,387	112,759	113,122	113,104	113,570
Employment-population ratio[4]	60.4	60.9	61.3	60.9	61.3	61.4	61.6	61.5	61.7
Resident Armed Forces	1,695	1,736	1,735	1,695	1,750	1,748	1,740	1,736	1,735
Civilian employed	108,201	110,229	111,041	108,969	110,637	111,011	111,382	111,368	111,835
Agriculture	3,121	2,932	3,223	3,199	3,161	3,145	3,236	3,284	3,290
Nonagricultural industries	105,080	107,297	107,817	105,770	107,476	107,866	108,146	108,084	108,545
Unemployed	8,115	8,124	7,306	8,323	7,949	8,023	7,967	7,854	7,500
Unemployment rate[5]	6.9	6.8	6.1	7.0	6.6	6.6	6.6	6.5	6.2
Not in labor force	63,831	63,826	63,997	62,856	62,961	62,793	62,649	62,957	63,009
Men, 16 years and over									
Noninstitutional population[2]	87,120	88,186	88,271	87,120	87,868	88,020	88,099	88,186	88,271
Labor force[2]	66,192	66,984	66,996	66,770	67,425	67,672	67,764	67,644	67,603
Participation rate[3]	76.0	76.0	75.9	76.6	76.7	76.9	76.9	76.7	76.6
Total employed[2]	61,665	62,291	62,811	62,253	62,986	63,187	63,335	63,282	63,417
Employment-population ratio[4]	70.8	70.6	71.2	71.5	71.7	71.8	71.9	71.8	71.8
Resident Armed Forces	1,541	1,575	1,575	1,541	1,593	1,591	1,584	1,575	1,575
Civilian employed	60,124	60,716	61,236	60,712	61,393	61,596	61,751	61,707	61,842
Unemployed	4,527	4,693	4,185	4,517	4,439	4,484	4,429	4,362	4,186
Unemployment rate[5]	6.8	7.0	6.2	6.8	6.6	6.6	6.5	6.4	6.2
Women, 16 years and over									
Noninstitutional population[2]	94,723	95,729	95,808	94,723	95,429	95,556	95,639	95,729	95,808
Labor force[2]	51,819	53,106	53,085	52,217	52,911	53,110	53,325	53,314	53,467
Participation rate[3]	54.7	55.5	55.4	55.1	55.4	55.6	55.8	55.7	55.8
Total employed[2]	48,231	49,674	49,965	48,411	49,401	49,572	49,787	49,822	50,153
Employment-population ratio[4]	50.9	51.9	52.2	51.1	51.8	51.9	52.1	52.0	52.3
Resident Armed Forces	154	161	160	154	157	157	156	161	160
Civilian employed	48,077	49,513	49,805	48,257	49,244	49,415	49,631	49,661	49,993
Unemployed	3,588	3,432	3,120	3,806	3,510	3,538	3,538	3,492	3,314
Unemployment rate[5]	6.9	6.5	5.9	7.3	6.6	6.7	6.6	6.6	6.2

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[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Apr. 1986	Mar. 1987	Apr. 1987	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987
TOTAL									
Civilian noninstitutional population	180,148	182,179	182,344	180,148	181,547	181,827	181,998	182,179	182,344
Civilian labor force	116,317	118,353	118,347	117,292	118,586	119,034	119,349	119,222	119,335
Participation rate	64.6	65.0	64.9	65.1	65.3	65.5	65.6	65.4	65.4
Employed	108,201	110,229	111,041	108,969	110,637	111,011	111,382	111,368	111,835
Employment-population ratio[2]	60.1	60.5	60.9	60.5	60.9	61.1	61.2	61.1	61.3
Unemployed	8,115	8,124	7,306	8,323	7,949	8,023	7,967	7,854	7,500
Unemployment rate	7.0	6.9	6.2	7.1	6.7	6.7	6.7	6.6	6.3
Men, 20 years and over									
Civilian noninstitutional population	78,309	79,303	79,387	78,309	78,973	79,132	79,216	79,303	79,387
Civilian labor force	60,801	61,693	61,660	61,080	61,826	61,948	61,973	61,983	61,976
Participation rate	77.6	77.8	77.7	78.0	78.3	78.3	78.2	78.2	78.1
Employed	57,010	57,752	58,159	57,392	58,101	58,227	58,325	58,410	58,567
Employment-population ratio[2]	72.8	72.8	73.3	73.3	73.6	73.6	73.6	73.7	73.8
Agriculture	2,298	2,201	2,397	2,319	2,289	2,254	2,300	2,411	2,411
Nonagricultural industries	54,713	55,551	55,762	55,073	55,812	55,974	56,024	55,999	56,155
Unemployed	3,791	3,941	3,501	3,688	3,725	3,720	3,648	3,573	3,409
Unemployment rate	6.2	6.4	5.7	6.0	6.0	6.0	5.9	5.8	5.5
Women, 20 years and over									
Civilian noninstitutional population	87,355	88,321	88,395	87,355	88,016	88,150	88,237	88,321	88,395
Civilian labor force	48,047	49,374	49,346	48,181	48,923	49,161	49,348	49,355	49,466
Participation rate	55.0	55.9	55.8	55.2	55.6	55.8	55.9	55.9	56.0
Employed	45,120	46,531	46,767	45,094	46,058	46,261	46,475	46,498	46,751
Employment-population ratio[2]	51.7	52.7	52.9	51.6	52.3	52.5	52.7	52.6	52.9
Agriculture	554	530	557	585	621	628	641	589	587
Nonagricultural industries	44,566	46,001	46,210	44,509	45,437	45,633	45,835	45,909	46,164
Unemployed	2,927	2,843	2,579	3,087	2,865	2,900	2,873	2,857	2,715
Unemployment rate	6.1	5.8	5.2	6.4	5.9	5.9	5.8	5.8	5.5
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,484	14,555	14,562	14,484	14,558	14,545	14,546	14,555	14,562
Civilian labor force	7,468	7,287	7,341	8,031	7,837	7,926	8,028	7,884	7,894
Participation rate	51.6	50.1	50.4	55.4	53.8	54.5	55.2	54.2	54.2
Employed	6,071	5,946	6,115	6,483	6,478	6,524	6,582	6,460	6,518
Employment-population ratio[2]	41.9	40.9	42.0	44.8	44.5	44.9	45.2	44.4	44.8
Agriculture	270	202	269	295	251	264	295	284	292
Nonagricultural industries	5,801	5,745	5,845	6,188	6,227	6,260	6,287	6,176	6,226
Unemployed	1,397	1,341	1,226	1,548	1,359	1,402	1,446	1,424	1,376
Unemployment rate	18.7	18.4	16.7	19.3	17.3	17.7	18.0	18.1	17.4

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Apr. 1986	Mar. 1987	Apr. 1987	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987
WHITE									
Civilian noninstitutional population	155,122	156,561	156,676	155,122	156,111	156,313	156,431	156,561	156,676
Civilian labor force	100,528	102,137	102,168	101,237	102,503	102,746	102,893	102,797	102,894
Participation rate	64.8	65.2	65.2	65.3	65.7	65.7	65.8	65.7	65.7
Employed	94,533	96,032	96,744	95,095	96,533	96,717	96,995	96,998	97,340
Employment-population ratio[2]	60.9	61.3	61.7	61.3	61.8	61.9	62.0	62.0	62.1
Unemployed	5,996	6,105	5,423	6,142	5,970	6,029	5,898	5,799	5,554
Unemployment rate	6.0	6.0	5.3	6.1	5.8	5.9	5.7	5.6	5.4
Men, 20 years and over									
Civilian labor force	53,279	53,936	53,874	53,444	54,172	54,182	54,175	54,107	54,051
Participation rate	78.1	78.2	78.0	78.3	78.8	78.7	78.6	78.4	78.3
Employed	50,413	50,850	51,205	50,663	51,286	51,297	51,362	51,364	51,462
Employment-population ratio[2]	73.9	73.7	74.2	74.2	74.6	74.5	74.5	74.5	74.6
Unemployed	2,867	3,086	2,669	2,781	2,886	2,885	2,813	2,743	2,589
Unemployment rate	5.4	5.7	5.0	5.2	5.3	5.3	5.2	5.1	4.8
Women, 20 years and over									
Civilian labor force	40,796	41,834	41,877	40,890	41,514	41,680	41,762	41,828	41,982
Participation rate	54.4	55.3	55.3	54.5	55.0	55.2	55.2	55.3	55.5
Employed	38,682	39,839	40,041	38,651	39,456	39,568	39,735	39,839	40,041
Employment-population ratio[2]	51.6	52.7	52.9	51.5	52.3	52.4	52.6	52.7	52.9
Unemployed	2,114	1,995	1,836	2,239	2,058	2,111	2,028	1,989	1,941
Unemployment rate	5.2	4.8	4.4	5.5	5.0	5.1	4.9	4.8	4.6
Both sexes, 16 to 19 years									
Civilian labor force	6,453	6,367	6,417	6,903	6,817	6,885	6,955	6,862	6,861
Participation rate	54.3	53.3	53.7	58.1	57.3	57.8	58.4	57.5	57.4
Employed	5,438	5,343	5,498	5,781	5,791	5,852	5,898	5,795	5,837
Employment-population ratio[2]	45.8	44.8	46.0	48.7	48.7	49.2	49.5	48.5	48.9
Unemployed	1,015	1,024	918	1,122	1,026	1,033	1,057	1,067	1,024
Unemployment rate	15.7	16.1	14.3	16.3	15.1	15.0	15.2	15.5	14.9
Men	16.3	18.2	15.9	17.1	15.5	16.1	16.0	17.1	16.7
Women	15.1	13.9	12.7	15.4	14.6	13.8	14.3	13.9	13.1
BLACK									
Civilian noninstitutional population	19,916	20,249	20,279	19,916	20,152	20,187	20,218	20,249	20,279
Civilian labor force	12,579	12,687	12,639	12,687	12,707	12,831	12,957	12,844	12,743
Participation rate	63.2	62.7	62.3	63.7	63.1	63.6	64.1	63.4	62.8
Employed	10,737	10,927	11,024	10,809	10,968	10,997	11,101	11,053	11,090
Employment-population ratio[2]	53.9	54.0	54.4	54.3	54.4	54.5	54.9	54.6	54.7
Unemployed	1,842	1,760	1,615	1,878	1,739	1,833	1,855	1,791	1,653
Unemployment rate	14.6	13.9	12.8	14.8	13.7	14.3	14.3	13.9	13.0
Men, 20 years and over									
Civilian labor force	5,890	5,949	5,958	5,904	5,947	5,986	6,012	5,997	5,980
Participation rate	74.8	74.2	74.2	75.0	74.5	74.9	75.1	74.8	74.4
Employed	5,098	5,236	5,275	5,149	5,244	5,256	5,288	5,305	5,328
Employment-population ratio[2]	64.8	65.3	65.7	65.4	65.7	65.7	66.0	66.1	66.3
Unemployed	792	713	683	755	703	730	724	692	652
Unemployment rate	13.4	12.0	11.5	12.8	11.8	12.2	12.0	11.5	10.9
Women, 20 years and over									
Civilian labor force	5,839	5,971	5,912	5,853	5,907	5,984	6,030	5,987	5,918
Participation rate	58.9	59.3	58.6	59.1	58.9	59.6	59.9	59.4	58.7
Employed	5,135	5,211	5,259	5,120	5,182	5,221	5,255	5,211	5,238
Employment-population ratio[2]	51.8	51.7	52.1	51.7	51.7	52.0	52.2	51.7	51.9
Unemployed	703	760	653	733	725	763	775	776	680
Unemployment rate	12.0	12.7	11.1	12.5	12.3	12.8	12.9	13.0	11.5
Both sexes, 16 to 19 years									
Civilian labor force	850	768	769	930	853	860	915	861	845
Participation rate	39.8	35.6	35.6	43.5	39.8	40.1	42.6	40.0	39.2
Employed	504	481	490	540	542	520	559	537	524
Employment-population ratio[2]	23.6	22.3	22.7	25.3	25.3	24.2	26.0	24.9	24.3
Unemployed	346	287	279	390	311	340	356	324	321
Unemployment rate	40.7	37.4	36.3	41.9	36.5	39.5	38.9	37.6	38.0
Men	38.6	36.8	36.1	41.2	36.1	36.5	38.3	36.5	39.3
Women	42.9	38.0	36.4	42.7	36.9	43.2	39.5	38.8	36.5
HISPANIC ORIGIN									
Civilian noninstitutional population	12,255	12,732	12,770	12,255	12,540	12,653	12,692	12,732	12,770
Civilian labor force	7,906	8,326	8,415	7,969	8,320	8,431	8,457	8,392	8,484
Participation rate	64.5	65.4	65.9	65.0	66.3	66.6	66.6	65.9	66.4
Employed	7,115	7,547	7,678	7,129	7,446	7,538	7,644	7,639	7,701
Employment-population ratio[2]	58.1	59.3	60.1	58.2	59.4	59.6	60.2	60.0	60.3
Unemployed	791	780	737	840	874	893	813	753	783
Unemployment rate	10.0	9.4	8.8	10.5	10.5	10.6	9.6	9.0	9.2

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(Numbers in thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Apr. 1986	Mar. 1987	Apr. 1987	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987
CHARACTERISTIC									
Civilian employed, 16 years and over	108,201	110,229	111,041	108,969	110,637	111,011	111,382	111,368	111,835
Married men, spouse present	39,397	39,739	39,887	39,504	40,093	40,102	39,913	40,100	39,967
Married women, spouse present	26,856	27,937	28,157	26,889	27,400	27,525	27,817	27,965	28,213
Women who maintain families	5,841	5,963	6,020	5,799	6,005	5,985	5,906	5,933	5,972
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,549	1,494	1,610	1,539	1,621	1,650	1,647	1,739	1,589
Self-employed workers	1,415	1,303	1,452	1,467	1,400	1,370	1,454	1,418	1,505
Unpaid family workers	158	135	162	173	152	136	126	150	175
Nonagricultural industries:									
Wage and salary workers	97,242	99,092	99,495	97,858	99,164	99,550	99,748	99,834	100,112
Government	16,495	16,883	16,748	16,231	16,443	16,412	16,532	16,568	16,484
Private industries	80,746	82,209	82,747	81,627	82,721	83,138	83,216	83,265	83,628
Private households	1,263	1,134	1,223	1,309	1,189	1,269	1,204	1,227	1,266
Other industries	79,483	81,075	81,524	80,318	81,532	81,869	82,012	82,038	82,362
Self-employed workers	7,586	7,921	8,052	7,634	8,056	8,192	8,187	8,050	8,117
Unpaid family workers	253	284	270	251	239	246	255	273	268
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,449	5,232	5,030	5,853	5,596	5,505	5,780	5,456	5,391
Slack work	2,465	2,440	2,269	2,534	2,444	2,473	2,535	2,440	2,322
Could only find part-time work	2,641	2,504	2,485	2,922	2,867	2,695	2,828	2,698	2,746
Voluntary part time	14,992	15,145	14,943	13,900	13,877	14,170	14,061	14,167	13,862
Nonagricultural industries:									
Part time for economic reasons	5,199	4,999	4,783	5,567	5,342	5,201	5,459	5,164	5,110
Slack work	2,321	2,280	2,092	2,382	2,286	2,261	2,340	2,218	2,137
Could only find part-time work	2,547	2,434	2,420	2,806	2,765	2,599	2,742	2,595	2,662
Voluntary part time	14,565	14,681	14,431	13,528	13,455	13,750	13,597	13,682	13,399

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

	Measure	Quarterly averages					Monthly data		
		1986				1987	1987		
		I	II	III	IV	I	Feb.	Mar.	Apr.
U-1	Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.9	1.9	1.8	1.8	1.8	1.7	1.7
U-2	Job losers as a percent of the civilian labor force	3.5	3.5	3.4	3.3	3.3	3.2	3.2	3.1
U-3	Unemployed persons 25 years and over as a percent of the civilian labor force	5.5	5.5	5.4	5.4	5.1	5.1	5.1	4.8
U-4	Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.7	6.8	6.6	6.5	6.3	6.3	6.2	5.9
U-5a	Total unemployed as a percent of the labor force, including the resident Armed Forces	7.0	7.0	6.8	6.8	6.6	6.6	6.5	6.2
U-5b	Total unemployed as a percent of the civilian labor force	7.1	7.1	6.9	6.9	6.7	6.7	6.6	6.3
U-6	Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.4	9.6	9.3	9.2	9.0	9.1	8.9	8.5
U-7	Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.4	10.5	10.2	10.2	10.0	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Apr. 1986	Mar. 1987	Apr. 1987	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987
CHARACTERISTIC									
Total, 16 years and over	8,323	7,854	7,500	7.1	6.7	6.7	6.7	6.6	6.3
Men, 16 years and over	4,517	4,362	4,186	6.9	6.7	6.8	6.7	6.6	6.3
Men, 20 years and over	3,688	3,573	3,409	6.0	6.0	6.0	5.9	5.8	5.4
Women, 16 years and over	3,806	3,492	3,314	7.3	6.7	6.7	6.7	6.6	6.2
Women, 20 years and over	3,087	2,857	2,715	6.4	5.9	5.9	5.8	5.8	5.5
Both sexes, 16 to 19 years	1,548	1,424	1,376	19.3	17.3	17.7	18.0	18.1	17.4
Married men, spouse present	1,746	1,721	1,695	4.2	4.3	4.2	4.2	4.1	4.1
Married women, spouse present	1,491	1,309	1,294	5.3	4.8	4.8	4.8	4.5	4.4
Women who maintain families	609	637	610	9.5	9.8	9.8	9.5	9.7	9.3
Full-time workers	6,759	6,275	6,018	6.7	6.3	6.4	6.3	6.2	5.9
Part-time workers	1,567	1,586	1,483	9.4	8.8	9.0	8.7	9.2	8.6
Labor force time lost[2]	--	--	--	8.1	7.6	7.6	7.6	7.4	7.3
INDUSTRY									
Nonagricultural private wage and salary workers	6,255	5,831	5,571	7.1	6.8	6.7	6.6	6.5	6.2
Mining	125	80	94	12.4	14.1	14.0	12.4	9.3	11.1
Construction	761	759	725	12.3	13.7	12.2	11.6	12.5	11.9
Manufacturing	1,514	1,496	1,348	6.9	6.9	6.8	6.8	6.9	6.2
Durable goods	902	856	795	6.9	6.4	6.8	6.8	6.7	6.2
Nondurable goods	612	639	553	6.9	7.7	6.8	6.9	7.3	6.7
Transportation and public utitities	332	281	293	5.5	4.6	4.8	4.0	4.6	4.8
Wholesale and retail trade	1,794	1,690	1,627	7.9	7.2	7.5	7.2	7.3	7.0
Finance and service industries	1,729	1,525	1,483	5.8	5.1	5.2	5.4	4.9	4.7
Government workers	603	585	608	3.6	3.3	3.6	3.7	3.4	3.6
Agricultural wage and salary workers	239	209	158	13.4	11.5	11.6	11.2	10.7	9.0

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Apr. 1986	Mar. 1987	Apr. 1987	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987
DURATION									
Less than 5 weeks	3,214	3,068	2,844	3,565	3,355	3,416	3,361	3,383	3,143
5 to 14 weeks	2,395	2,672	2,020	2,650	2,389	2,530	2,477	2,447	2,232
15 weeks and over	2,507	2,384	2,442	2,130	2,171	2,200	2,131	2,050	2,075
15 to 26 weeks	1,254	1,196	1,297	982	1,023	1,022	1,008	945	1,025
27 weeks and over	1,253	1,188	1,145	1,148	1,148	1,178	1,123	1,105	1,049
Average (mean) duration, in weeks	15.8	15.6	16.0	14.7	15.0	15.0	14.6	14.9	14.9
Median duration, in weeks	7.9	8.2	8.3	6.6	7.1	7.0	6.6	6.6	7.0
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	39.6	37.8	38.9	42.7	42.4	41.9	42.2	42.9	42.2
5 to 14 weeks	29.5	32.9	27.6	31.8	30.2	31.1	31.1	31.1	30.0
15 weeks and over	30.9	29.3	33.4	25.5	27.4	27.0	26.7	26.0	27.9
15 to 26 weeks	15.5	14.7	17.8	11.8	12.9	12.5	12.7	12.0	13.8
27 weeks and over	15.4	14.6	15.7	13.8	14.5	14.5	14.1	14.0	14.1

Table A-8. Reason for unemployment

(Numbers in thousands)

Reason	Not seasonally adjusted			Seasonally adjusted					
	Apr. 1986	Mar. 1987	Apr. 1987	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987
NUMBER OF UNEMPLOYED									
Job losers	4,095	4,227	3,788	4,035	3,890	3,971	3,839	3,822	3,732
On layoff	1,020	1,206	923	1,057	1,078	1,118	998	1,011	958
Other job losers	3,075	3,021	2,865	2,978	2,812	2,854	2,842	2,811	2,774
Job leavers	996	934	860	1,071	1,036	891	1,046	1,000	923
Reentrants	2,042	2,107	1,812	2,188	2,019	2,054	2,042	2,111	1,940
New entrants	982	857	846	1,048	1,015	1,084	1,040	956	911
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	50.5	52.0	51.8	48.4	48.9	49.6	48.2	48.4	49.7
On layoff	12.6	14.8	12.6	12.7	13.5	14.0	12.5	12.8	12.8
Other job losers	37.9	37.2	39.2	35.7	35.3	35.7	35.7	35.6	37.0
Job leavers	12.3	11.5	11.8	12.8	13.0	11.1	13.1	12.7	12.3
Reentrants	25.2	25.9	24.8	26.2	25.4	25.7	25.6	26.8	25.8
New entrants	12.1	10.5	11.6	12.6	12.8	13.6	13.1	12.1	12.1
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	3.5	3.6	3.2	3.4	3.3	3.3	3.2	3.2	3.1
Job leavers	.9	.8	.7	.9	.9	.7	.9	.8	.8
Reentrants	1.8	1.8	1.5	1.9	1.7	1.7	1.7	1.8	1.6
New entrants	.8	.7	.7	.9	.9	.9	.9	.8	.8

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Apr. 1986	Mar. 1987	Apr. 1987	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987
Total, 16 years and over	8,323	7,854	7,500	7.1	6.7	6.7	6.7	6.6	6.3
16 to 24 years	3,218	2,969	2,901	13.7	12.9	13.1	13.1	12.9	12.6
16 to 19 years	1,548	1,424	1,376	19.3	17.3	17.7	18.0	18.1	17.4
16 to 17 years	686	670	623	20.8	18.8	20.1	20.3	20.0	19.2
18 to 19 years	868	753	756	18.4	16.3	16.2	16.6	16.5	16.3
20 to 24 years	1,670	1,545	1,525	10.8	10.7	10.7	10.5	10.2	10.1
25 years and over	5,097	4,872	4,588	5.4	5.2	5.2	5.1	5.1	4.8
25 to 54 years	4,521	4,363	4,079	5.7	5.5	5.6	5.5	5.4	5.0
55 years and over	576	509	512	3.9	3.5	3.2	3.0	3.4	3.4
Men, 16 years and over	4,517	4,362	4,186	6.9	6.7	6.8	6.7	6.6	6.3
16 to 24 years	1,757	1,589	1,583	14.2	13.4	13.4	13.6	13.2	13.2
16 to 19 years	829	789	777	20.0	17.8	18.5	18.6	19.3	19.2
16 to 17 years	363	344	366	21.1	19.1	21.4	21.2	20.2	21.5
18 to 19 years	467	444	411	19.2	17.0	16.9	17.0	18.6	17.5
20 to 24 years	928	800	806	11.3	11.3	10.7	11.1	10.1	10.1
25 years and over	2,758	2,758	2,597	5.2	5.2	5.4	5.1	5.1	4.8
25 to 54 years	2,420	2,435	2,276	5.5	5.5	5.7	5.4	5.4	5.0
55 years and over	348	316	330	4.0	4.0	3.5	3.3	3.6	3.7
Women, 16 years and over	3,806	3,492	3,314	7.3	6.7	6.7	6.7	6.6	6.2
16 to 24 years	1,461	1,380	1,319	13.1	12.4	12.7	12.4	12.5	12.0
16 to 19 years	719	635	599	18.5	16.8	16.8	17.4	16.7	15.6
16 to 17 years	323	326	257	20.4	18.4	18.7	19.2	19.7	16.7
18 to 19 years	401	309	345	17.6	15.7	15.3	16.1	14.2	15.1
20 to 24 years	742	745	720	10.2	10.0	10.6	9.8	10.3	10.1
25 years and over	2,339	2,113	1,991	5.7	5.2	5.1	5.1	5.0	4.7
25 to 54 years	2,101	1,928	1,803	6.0	5.5	5.5	5.6	5.4	5.0
55 years and over	228	193	183	3.8	2.9	2.7	2.6	3.2	3.0

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[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted¹					
	Apr. 1986	Mar. 1987	Apr. 1987	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987
Civilian noninstitutional population	25,025	25,618	25,667	25,025	25,436	25,515	25,567	25,618	25,667
Civilian labor force	15,788	16,216	16,179	16,002	16,157	16,384	16,407	16,455	16,394
Participation rate	63.1	63.3	63.0	63.9	63.5	64.2	64.2	64.2	63.9
Employed	13,669	14,197	14,296	13,838	14,170	14,316	14,306	14,391	14,468
Employment-population ratio²	54.6	55.4	55.7	55.3	55.7	56.1	56.0	56.2	56.4
Unemployed	2,120	2,019	1,883	2,164	1,987	2,068	2,101	2,064	1,925
Unemployment rate	13.4	12.5	11.6	13.5	12.3	12.6	12.8	12.5	11.7
Not in labor force	9,237	9,402	9,488	9,023	9,279	9,131	9,160	9,163	9,273

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Apr. 1986	Apr. 1987	Apr. 1986	Apr. 1987	Apr. 1986	Apr. 1987
Total, 16 years and over¹	108,281	111,041	8,115	7,306	7.0	6.2
Managerial and professional specialty	26,524	27,418	568	596	2.1	2.1
Executive, administrative, and managerial	12,488	12,981	279	335	2.2	2.5
Professional specialty	14,036	14,437	288	261	2.0	1.8
Technical, sales, and administrative support	33,883	34,498	1,565	1,547	4.4	4.3
Technicians and related support	3,269	3,186	121	118	3.6	3.6
Sales occupations	12,975	13,164	682	696	5.0	5.0
Administrative support, including clerical	17,639	18,148	763	733	4.1	3.9
Service occupations	14,639	15,082	1,420	1,234	8.8	7.6
Private household	1,009	960	80	57	7.4	5.6
Protective service	1,739	1,886	93	100	5.1	5.0
Service, except private household and protective	11,892	12,236	1,247	1,076	9.5	8.1
Precision production, craft, and repair	12,993	13,469	1,124	941	8.0	6.5
Mechanics and repairers	4,326	4,381	241	202	5.3	4.4
Construction trades	4,702	4,894	576	534	10.9	9.8
Other precision production, craft, and repair	3,964	4,193	307	206	7.2	4.7
Operators, fabricators, and laborers	16,745	17,076	2,099	1,855	11.1	9.8
Machine operators, assemblers, and inspectors	7,715	7,887	913	817	10.6	9.4
Transportation and material moving occupations	4,488	4,638	472	366	9.5	7.3
Handlers, equipment cleaners, helpers, and laborers	4,562	4,551	715	672	13.6	12.9
Construction laborers	651	715	173	204	21.0	22.2
Other handlers, equipment cleaners, helpers, and laborers	3,911	3,837	542	468	12.2	10.9
Farming, forestry, and fishing	3,397	3,498	303	242	8.2	6.5

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Apr. 1986	Apr. 1987	Apr. 1986	Apr. 1987	Apr. 1986	Apr. 1987	Apr. 1986	Apr. 1987	Apr. 1986	Apr. 1987
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,724	7,816	7,164	7,277	6,794	6,896	370	381	5.2	5.2
30 to 44 years	6,412	6,232	6,105	5,983	5,778	5,670	327	313	5.4	5.2
30 to 34 years	1,190	968	1,116	930	1,031	839	85	91	7.6	9.8
35 to 39 years	3,163	2,707	3,022	2,596	2,860	2,475	162	121	5.4	4.7
40 to 44 years	2,059	2,557	1,967	2,457	1,887	2,356	80	101	4.1	4.1
45 years and over	1,312	1,584	1,059	1,294	1,016	1,226	43	68	4.1	5.3
NONVETERANS										
Total, 30 to 44 years	18,176	19,252	17,194	18,164	16,251	17,302	943	862	5.5	4.7
30 to 34 years	8,451	8,769	8,039	8,342	7,562	7,924	477	418	5.9	5.0
35 to 39 years	5,514	6,110	5,226	5,750	4,964	5,490	262	260	5.0	4.5
40 to 44 years	4,211	4,373	3,929	4,072	3,725	3,888	204	184	5.2	4.5

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13.[1] Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted			Seasonally adjusted[2]					
	Apr. 1986	Mar. 1987	Apr.p 1987	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987
California									
Civilian noninstitutional population	20,021	20,440	20,477	20,021	20,314	20,364	20,401	20,440	20,477
Civilian labor force	13,209	13,624	13,690	13,284	13,476	13,403	13,626	13,655	13,761
Employed	12,325	12,764	12,900	12,386	12,569	12,568	12,779	12,833	12,959
Unemployed	884	860	790	898	907	835	847	822	802
Unemployment rate	6.7	6.3	5.8	6.8	6.7	6.2	6.2	6.0	5.8
Florida									
Civilian noninstitutional population	9,118	9,355	9,376	9,118	9,283	9,312	9,333	9,355	9,376
Civilian labor force	5,457	5,811	5,768	5,531	5,726	5,729	5,775	5,853	5,837
Employed	5,160	5,498	5,469	5,208	5,449	5,396	5,446	5,524	5,515
Unemployed	297	312	299	323	277	333	329	329	322
Unemployment rate	5.4	5.4	5.2	5.8	4.8	5.8	5.7	5.6	5.5
Illinois									
Civilian noninstitutional population	8,654	8,678	8,680	8,654	8,667	8,676	8,676	8,678	8,680
Civilian labor force	5,639	5,581	5,612	5,680	5,643	5,620	5,633	5,620	5,652
Employed	5,176	5,129	5,150	5,212	5,223	5,205	5,199	5,186	5,186
Unemployed	463	451	462	468	420	415	434	434	466
Unemployment rate	8.2	8.1	8.2	8.2	7.4	7.4	7.7	7.7	8.2
Massachusetts									
Civilian noninstitutional population	4,549	4,567	4,568	4,549	4,559	4,563	4,565	4,567	4,568
Civilian labor force	3,016	3,048	3,046	3,042	3,052	3,052	3,040	3,074	3,070
Employed	2,901	2,912	2,928	2,920	2,950	2,946	2,935	2,953	2,947
Unemployed	116	136	118	122	102	106	105	121	123
Unemployment rate	3.8	4.5	3.9	4.0	3.3	3.5	3.5	3.9	4.0
Michigan									
Civilian noninstitutional population	6,847	6,909	6,914	6,847	6,888	6,897	6,903	6,909	6,914
Civilian labor force	4,332	4,463	4,450	4,347	4,497	4,496	4,474	4,500	4,466
Employed	3,938	4,088	4,072	3,947	4,135	4,163	4,092	4,138	4,081
Unemployed	394	376	379	400	362	333	382	362	385
Unemployment rate	9.1	8.4	8.5	9.2	8.0	7.4	8.5	8.0	8.6
New Jersey									
Civilian noninstitutional population	5,910	5,966	5,971	5,910	5,948	5,956	5,961	5,966	5,971
Civilian labor force	3,840	3,950	3,934	3,851	3,900	3,857	3,908	3,965	3,946
Employed	3,660	3,781	3,785	3,664	3,727	3,718	3,746	3,819	3,791
Unemployed	180	169	149	187	173	139	162	146	155
Unemployment rate	4.7	4.3	3.8	4.9	4.4	3.6	4.1	3.7	3.9
New York									
Civilian noninstitutional population	13,724	13,766	13,769	13,724	13,747	13,759	13,762	13,766	13,769
Civilian labor force	8,239	8,450	8,337	8,370	8,423	8,511	8,484	8,511	8,473
Employed	7,686	8,000	7,934	7,806	7,921	8,009	8,065	8,108	8,062
Unemployed	554	450	403	564	502	502	419	403	411
Unemployment rate	6.7	5.3	4.8	6.7	6.0	5.9	4.9	4.7	4.9
North Carolina									
Civilian noninstitutional population	4,760	4,816	4,822	4,760	4,792	4,802	4,809	4,816	4,822
Civilian labor force	3,118	3,239	3,226	3,155	3,221	3,271	3,290	3,264	3,267
Employed	2,959	3,079	3,086	2,981	3,048	3,115	3,122	3,107	3,112
Unemployed	159	160	140	174	173	156	168	157	155
Unemployment rate	5.1	4.9	4.3	5.5	5.4	4.8	5.1	4.8	4.7
Ohio									
Civilian noninstitutional population	8,101	8,127	8,128	8,101	8,115	8,122	8,124	8,127	8,128
Civilian labor force	5,225	5,134	5,204	5,248	5,276	5,287	5,303	5,215	5,223
Employed	4,811	4,731	4,837	4,823	4,861	4,850	4,848	4,824	4,846
Unemployed	414	403	367	425	415	437	455	391	377
Unemployment rate	7.9	7.9	7.1	8.1	7.9	8.3	8.6	7.5	7.2
Pennsylvania									
Civilian noninstitutional population	9,231	9,269	9,272	9,231	9,254	9,262	9,266	9,269	9,272
Civilian labor force	5,607	5,446	5,459	5,701	5,528	5,610	5,561	5,530	5,545
Employed	5,214	5,106	5,164	5,296	5,229	5,267	5,255	5,204	5,238
Unemployed	393	340	295	405	299	343	306	326	307
Unemployment rate	7.0	6.2	5.4	7.1	5.4	6.1	5.5	5.9	5.5
Texas									
Civilian noninstitutional population	11,941	12,154	12,172	11,941	12,089	12,115	12,136	12,154	12,172
Civilian labor force	8,032	8,107	8,208	8,091	8,154	8,293	8,315	8,134	8,267
Employed	7,376	7,438	7,528	7,400	7,350	7,497	7,592	7,494	7,552
Unemployed	656	668	680	691	804	796	723	640	715
Unemployment rate	8.2	8.2	8.3	8.5	9.6	9.6	8.7	7.9	8.6

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Apr. 1986	Feb. 1987	Mar. 1987 p	Apr. 1987 p	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987 p	Apr. 1987 p
Total	99,553	100,494	101,131	102,091	99,783	101,322	101,626	101,854	102,009	102,325
Total private	82,547	83,316	83,856	84,775	83,072	84,394	84,708	84,948	85,054	85,311
Goods-producing	24,751	24,343	24,472	24,756	25,038	24,920	25,008	25,038	25,004	25,046
Mining	814	723	726	733	821	738	731	733	735	740
Oil and gas extraction	479.9	415.8	414.6	416.4	488	414	412	415	418	424
Construction	4,783	4,559	4,644	4,889	4,972	4,996	5,109	5,094	5,059	5,082
General building contractors	1,260.0	1,199.2	1,209.2	1,234.7	1,315	1,298	1,333	1,321	1,307	1,289
Manufacturing	19,154	19,061	19,102	19,134	19,265	19,186	19,168	19,211	19,210	19,224
Production workers	12,997	12,945	12,993	13,026	13,060	13,053	13,031	13,070	13,076	13,093
Durable goods	11,390	11,231	11,257	11,268	11,415	11,289	11,265	11,300	11,293	11,293
Production workers	7,538	7,422	7,455	7,470	7,547	7,466	7,440	7,477	7,476	7,482
Lumber and wood products	704.3	729.7	735.1	743.0	719	749	754	756	755	758
Furniture and fixtures	495.3	504.6	506.5	507.9	494	500	503	503	505	507
Stone, clay, and glass products	593.7	572.6	579.6	591.0	600	594	595	598	595	597
Primary metal industries	790.2	751.2	761.8	764.7	785	752	741	751	758	759
Blast furnaces and basic steel products	294.7	271.7	280.6	283.1	291	270	264	272	279	280
Fabricated metal products	1,445.4	1,420.7	1,422.9	1,426.6	1,451	1,431	1,430	1,429	1,429	1,432
Machinery, except electrical	2,115.0	2,042.8	2,046.6	2,052.1	2,111	2,030	2,029	2,043	2,043	2,048
Electrical and electronic equipment	2,170.6	2,148.4	2,141.1	2,137.9	2,177	2,164	2,156	2,153	2,141	2,144
Transportation equipment	1,986.3	1,992.3	1,987.6	1,971.2	1,986	1,990	1,979	1,990	1,986	1,971
Motor vehicles and equipment	852.6	835.6	829.1	815.8	856	832	826	838	830	817
Instruments and related products	721.6	705.1	706.3	705.2	723	709	709	707	708	707
Miscellaneous manufacturing	367.7	363.4	369.8	368.8	369	370	369	370	373	370
Nondurable goods	7,764	7,830	7,845	7,866	7,830	7,897	7,903	7,911	7,917	7,931
Production workers	5,459	5,523	5,538	5,556	5,513	5,587	5,591	5,593	5,600	5,611
Food and kindred products	1,572.8	1,601.6	1,602.9	1,603.8	1,633	1,657	1,654	1,658	1,663	1,665
Tobacco manufactures	59.3	59.8	57.4	55.9	63	60	59	60	60	59
Textile mill products	703.6	721.4	724.7	726.6	703	719	722	726	728	726
Apparel and other textile products	1,121.1	1,116.1	1,116.6	1,119.7	1,119	1,124	1,123	1,115	1,113	1,117
Paper and allied products	685.1	689.7	691.6	692.7	689	697	694	695	695	696
Printing and publishing	1,473.5	1,503.9	1,507.5	1,515.8	1,472	1,493	1,500	1,505	1,506	1,514
Chemicals and allied products	1,026.7	1,016.4	1,017.8	1,017.6	1,028	1,020	1,021	1,020	1,019	1,019
Petroleum and coal products	165.4	155.2	156.0	157.5	166	159	159	159	158	158
Rubber and miscellaneous plastics products	800.8	815.5	819.9	824.4	800	815	819	820	822	824
Leather and leather products	155.9	150.0	150.4	152.1	157	153	152	153	153	153
Service-producing	74,802	76,151	76,659	77,335	74,745	76,402	76,618	76,816	77,005	77,279
Transportation and public utilities	5,229	5,321	5,345	5,377	5,266	5,359	5,382	5,394	5,412	5,415
Transportation	3,016	3,090	3,110	3,144	3,040	3,125	3,140	3,150	3,164	3,169
Communication and public utilities	2,213	2,231	2,235	2,233	2,226	2,234	2,242	2,244	2,248	2,246
Wholesale trade	5,838	5,827	5,839	5,856	5,864	5,859	5,864	5,877	5,877	5,882
Durable goods	3,478	3,478	3,486	3,492	3,485	3,491	3,495	3,499	3,500	3,499
Nondurable goods	2,360	2,349	2,353	2,364	2,379	2,368	2,369	2,378	2,377	2,383
Retail trade	17,655	17,872	17,979	18,266	17,851	18,206	18,289	18,368	18,402	18,469
General merchandise stores	2,255.1	2,271.4	2,271.3	2,274.3	2,342	2,341	2,333	2,354	2,359	2,362
Food stores	2,878.4	2,981.4	2,973.1	2,992.1	2,910	2,979	2,990	3,005	3,006	3,025
Automotive dealers and service stations	1,932.6	1,962.0	1,969.2	1,979.9	1,940	1,984	1,988	1,992	1,989	1,988
Eating and drinking places	5,859.4	5,822.9	5,930.0	6,122.6	5,859	6,035	6,080	6,104	6,113	6,123
Finance, insurance, and real estate	6,203	6,462	6,501	6,554	6,228	6,472	6,495	6,519	6,544	6,581
Finance	3,111	3,239	3,257	3,276	3,120	3,236	3,239	3,249	3,264	3,286
Insurance	1,906	2,005	2,014	2,020	1,910	1,990	2,002	2,007	2,016	2,024
Real estate	1,186	1,218	1,230	1,258	1,198	1,246	1,254	1,263	1,264	1,271
Services	22,871	23,491	23,720	23,966	22,825	23,578	23,670	23,752	23,815	23,918
Business services	4,707.6	4,947.3	5,003.2	5,028.8	4,750	4,966	4,990	5,038	5,054	5,074
Health services	6,504.7	6,767.2	6,800.4	6,827.2	6,511	6,726	6,757	6,788	6,807	6,834
Government	17,006	17,178	17,275	17,316	16,711	16,928	16,918	16,906	16,955	17,014
Federal	2,908	2,897	2,916	2,931	2,914	2,907	2,914	2,917	2,931	2,937
State	4,032	4,072	4,088	4,099	3,938	3,983	3,983	3,980	3,984	4,003
Local	10,066	10,209	10,271	10,286	9,859	10,038	10,021	10,009	10,040	10,074

p = preliminary.

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Apr. 1986	Feb. 1987	Mar. 1987 p	Apr. 1987 p	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987 p	Apr. 1987 p
Total private	34.6	34.6	34.6	34.5	34.8	34.6	34.8	35.0	34.8	34.7
Mining	42.0	42.4	42.1	41.8	(2)	(2)	(2)	(2)	(2)	(2)
Construction	37.6	36.9	37.5	37.5	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.5	40.8	40.9	40.4	40.7	40.8	41.0	41.3	41.0	40.5
Overtime hours	3.2	3.5	3.6	3.3	3.6	3.5	3.6	3.6	3.7	3.4
Durable goods	41.2	41.5	41.6	41.1	41.3	41.3	41.6	41.9	41.6	41.2
Overtime hours	3.6	3.6	3.7	3.4	3.6	3.6	3.7	3.7	3.8	3.6
Lumber and wood products	40.2	40.5	40.7	40.6	40.3	40.4	40.7	41.2	40.9	40.7
Furniture and fixtures	38.9	39.3	39.8	39.0	39.1	39.6	40.2	40.1	40.0	39.2
Stone, clay, and glass products	42.5	41.9	42.3	42.2	42.4	42.1	42.9	42.2	42.7	42.1
Primary metal industries	41.6	42.7	42.8	42.5	41.3	42.5	42.7	42.7	42.7	42.2
Blast furnaces and basic steel products	41.2	42.3	42.4	42.7	40.5	42.7	42.8	42.2	42.3	41.9
Fabricated metal products	41.0	41.3	41.4	40.7	41.2	41.1	41.5	41.8	41.4	40.9
Machinery, except electrical	41.5	42.1	42.2	41.6	41.8	41.5	42.0	42.2	42.0	41.9
Electrical and electronic equipment	40.8	40.9	41.0	40.3	41.1	41.0	41.0	41.3	40.9	40.6
Transportation equipment	42.3	42.4	42.7	42.1	42.1	42.1	42.3	42.7	42.6	41.9
Motor vehicles and equipment	42.4	43.0	43.3	42.7	41.9	42.6	43.2	43.5	43.2	42.2
Instruments and related products	41.0	41.3	41.4	40.5	41.3	41.3	41.2	41.5	41.3	40.8
Miscellaneous manufacturing	39.7	39.3	39.3	38.8	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	39.6	39.9	40.0	39.4	39.9	40.1	40.1	40.4	40.2	39.7
Overtime hours	3.1	3.3	3.4	3.1	3.3	3.5	3.5	3.5	3.5	3.3
Food and kindred products	39.6	39.4	39.5	39.3	40.2	39.8	40.0	40.2	40.0	39.9
Tobacco manufactures	36.6	36.5	38.4	36.7	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	40.6	41.8	42.1	40.8	41.3	41.9	41.7	42.3	42.2	41.5
Apparel and other textile products	36.4	37.2	37.1	35.7	36.9	37.0	36.9	37.7	37.1	36.2
Paper and allied products	42.9	43.1	42.9	42.4	43.0	43.4	43.6	43.6	43.1	42.5
Printing and publishing	37.9	37.8	38.0	37.8	38.0	38.1	38.0	38.2	37.9	37.8
Chemicals and allied products	41.9	42.1	42.2	42.3	41.9	42.2	42.3	42.2	42.1	42.3
Petroleum and coal products	43.5	43.8	44.3	43.9	43.6	43.6	45.0	44.6	44.6	44.0
Rubber and miscellaneous plastics products	41.1	41.5	41.6	40.8	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	36.3	37.2	37.5	36.3	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	39.0	39.1	39.[illegible]	38.8	39.2	39.0	39.1	39.4	39.3	39.0
Wholesale trade	38.3	38.1	38.1	38.1	38.5	38.2	38.3	38.5	38.3	38.3
Retail trade	28.9	28.8	28.9	29.2	29.2	28.9	29.0	29.3	29.3	29.3
Finance, insurance, and real estate	36.4	36.5	36.4	36.4	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.4	32.3	32.3	32.2	32.5	32.4	32.4	32.5	32.4	32.3

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[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers¹ on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Apr. 1986	Feb. 1987	Mar. 1987 p	Apr. 1987 p	Apr. 1986	Feb. 1987	Mar. 1987 p	Apr. 1987 p
Total private	$8.72	$8.89	$8.89	$8.89	$301.71	$307.59	$307.59	$306.71
Seasonally adjusted	8.72	8.86	8.90	8.88	303.46	310.10	309.72	308.14
Mining	12.43	12.60	12.56	12.43	522.06	534.24	528.78	519.57
Construction	12.29	12.46	12.55	12.54	462.10	459.77	470.63	470.25
Manufacturing	9.70	9.83	9.84	9.87	392.85	401.06	402.46	398.75
Durable goods	10.28	10.39	10.38	10.39	423.54	431.19	431.81	427.03
Lumber and wood products	8.32	8.33	8.30	8.36	334.46	337.37	337.81	339.42
Furniture and fixtures	7.36	7.55	7.55	7.55	286.30	296.72	300.49	294.45
Stone, clay, and glass products	10.00	10.15	10.14	10.26	425.00	425.29	428.92	432.97
Primary metal industries	12.00	11.88	11.93	12.11	499.20	507.28	510.60	514.68
Blast furnaces and basic steel products	13.82	13.71	13.70	14.10	569.38	579.93	584.27	602.07
Fabricated metal products	9.84	9.98	9.97	9.96	403.44	412.17	412.76	405.37
Machinery, except electrical	10.55	10.65	10.68	10.65	437.83	448.37	450.70	443.04
Electrical and electronic equipment	9.62	9.86	9.85	9.87	392.50	403.27	403.85	397.76
Transportation equipment	12.83	12.94	12.91	12.86	542.71	548.66	551.26	541.41
Motor vehicles and equipment	13.34	13.59	13.50	13.50	574.10	584.37	588.01	576.45
Instruments and related products	9.41	9.65	9.61	9.58	385.81	398.55	397.85	387.99
Miscellaneous manufacturing	7.30	7.68	7.66	7.67	297.75	301.82	301.04	297.60
Nondurable goods	8.88	9.06	9.08	9.14	351.65	361.49	363.20	360.12
Food and kindred products	8.75	8.91	8.94	8.98	346.50	351.05	353.13	352.91
Tobacco manufactures	12.84	13.38	13.76	14.12	469.94	488.37	528.38	518.20
Textile mill products	6.87	7.13	7.14	7.18	278.92	298.03	300.59	292.94
Apparel and other textile products	5.81	5.88	5.90	5.92	211.48	218.74	218.89	211.34
Paper and allied products	11.05	11.18	11.18	11.30	474.05	481.86	479.62	479.12
Printing and publishing	9.87	10.16	10.17	10.18	374.07	384.05	386.46	384.80
Chemicals and allied products	11.82	12.20	12.23	12.32	495.26	513.62	516.11	521.14
Petroleum and coal products	14.16	14.35	14.38	14.33	615.96	628.53	637.03	629.09
Rubber and miscellaneous plastics products	8.68	8.82	8.83	8.81	356.75	366.03	367.33	359.45
Leather and leather products	5.89	5.99	6.04	6.15	213.81	222.83	226.50	223.25
Transportation and public utilities	11.55	11.77	11.75	11.79	450.45	460.21	459.43	457.45
Wholesale trade	9.29	9.55	9.53	9.55	355.81	363.86	363.09	363.86
Retail trade	6.01	6.06	6.06	6.06	173.69	174.53	175.13	176.95
Finance, insurance, and real estate	8.29	8.71	8.69	8.63	301.76	317.92	316.32	314.13
Services	8.12	8.41	8.40	8.38	263.09	271.64	271.32	269.84

¹ See footnote 1, table B-2.

p = preliminary

Table B-4. Hourly Earnings Index for production or nonsupervisory workers¹ on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	Apr. 1986	Feb. 1987	Mar. 1987p	Apr. 1987p	Percent change from: Apr. 1986-Apr. 1987	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987p	Apr. 1987p	Percent change from: Mar. 1987-Apr. 1987
Total private nonfarm:												
Current dollars	168.6	171.0	171.8	172.2	2.2	168.4	170.6	170.7	171.4	171.8	172.2	0.2
Constant (1977) dollars	95.6	94.8	94.3	N.A.	(2)	95.3	95.0	94.6	94.6	94.2	N.A.	(3)
Mining	101.2	101.4	101.3	100.9	-.2	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Construction	149.9	151.1	152.3	152.7	1.9	150.6	153.9	151.7	151.1	153.2	153.5	.2
Manufacturing	172.2	174.1	174.1	175.2	1.7	172.0	173.5	173.4	173.9	173.9	175.0	.6
Transportation and public utilities	169.0	173.0	172.7	173.3	2.6	169.3	171.2	171.5	172.3	172.9	173.6	.4
Wholesale trade	171.3	175.0	175.6	176.1	2.8	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Retail trade	157.8	159.0	159.1	159.5	1.1	157.3	159.3	158.4	158.5	158.8	159.0	.2
Finance, insurance, and real estate	178.9	187.5	186.9	185.6	3.8	(4)	(4)	(4)	(4)	(4)	(4)	(4)
Services	173.1	179.1	179.0	178.8	3.3	173.1	175.8	176.9	178.4	179.0	178.8	-.1

1 See footnote 1, table B-2.
2 Percent change is -0.9 percent from March 1986 to March 1987, the latest month available.
3 Percent change is -0.2 percent from February 1987 to March 1987, the latest month available.
4 These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
N.A. Data not available.
p = preliminary.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Apr. 1986	Feb. 1987	Mar. 1987 p	Apr. 1987 p	Apr. 1986	Dec. 1986	Jan. 1987	Feb. 1987	Mar. 1987 p	Apr. 1987 p
Total	116.3	116.8	117.9	119.1	117.8	119.0	119.9	121.1	120.6	120.5
Goods-producing	97.6	95.9	97.1	97.4	99.4	99.0	100.4	101.0	100.1	99.3
Mining	88.6	80.1	80.1	80.7	90.2	81.4	81.0	82.3	82.1	81.9
Construction	126.8	116.3	120.7	128.3	133.7	132.2	139.9	138.7	135.8	135.3
Manufacturing	92.3	92.6	93.3	92.2	93.2	93.4	93.6	94.6	94.0	93.1
Durable goods	91.1	90.4	91.1	90.0	91.5	90.5	90.9	91.9	91.3	90.6
Lumber and wood products	96.6	100.1	101.4	102.5	99.3	103.2	104.1	105.9	105.1	105.1
Furniture and fixtures	103.6	106.7	108.4	106.5	103.6	106.5	108.6	108.6	108.7	106.8
Stone, clay, and glass products	88.4	83.8	85.8	87.8	89.2	87.7	89.7	90.9	89.5	88.6
Primary metal industries	65.6	63.1	64.6	64.4	64.7	62.9	61.9	63.1	63.8	63.5
Blast furnaces and basic steel products	53.6	49.0	51.3	52.4	51.8	49.5	47.9	48.9	50.7	50.7
Fabricated metal products	89.2	88.2	88.8	87.6	90.1	88.8	89.4	89.8	89.1	88.4
Machinery, except electrical	89.3	86.7	87.2	86.4	89.4	84.6	85.6	86.6	86.6	86.6
Electrical and electronic equipment	102.1	102.0	101.8	100.0	103.0	102.9	102.5	103.0	101.4	100.8
Transportation equipment	96.2	97.1	97.3	94.6	95.6	95.6	95.5	97.5	96.8	93.9
Motor vehicles and equipment	86.4	86.2	86.3	83.3	85.3	84.1	85.1	87.5	86.0	82.3
Instruments and related products	105.2	103.5	104.6	102.3	106.1	104.5	103.4	104.4	104.2	103.7
Miscellaneous manufacturing	81.0	79.9	81.7	80.6	81.6	82.5	83.0	83.3	82.6	81.2
Nondurable goods	94.1	96.1	96.6	95.4	95.8	97.6	97.7	98.5	98.0	97.1
Food and kindred products	92.8	94.8	95.2	94.6	99.1	100.1	100.6	101.3	101.2	101.0
Tobacco manufactures	74.3	75.9	75.8	70.8	81.6	78.4	79.1	79.1	82.0	76.7
Textile mill products	77.1	82.0	83.0	80.5	78.4	81.7	81.7	83.6	83.7	81.9
Apparel and other textile products	85.8	87.2	87.0	84.0	86.6	87.6	87.1	88.2	86.6	84.9
Paper and allied products	100.5	101.6	101.5	100.7	101.0	103.7	103.4	103.6	102.4	101.4
Printing and publishing	127.8	130.2	131.4	131.7	127.8	130.8	131.1	131.6	130.6	131.5
Chemicals and allied products	93.2	93.3	94.0	94.0	93.2	93.4	93.9	93.9	93.7	93.9
Petroleum and coal products	79.5	77.4	79.2	80.1	80.1	79.3	81.8	80.7	80.7	80.8
Rubber and miscellaneous plastics products	112.1	115.2	116.1	114.8	111.8	115.2	115.3	116.3	116.1	114.4
Leather and leather products	58.1	57.4	58.0	56.9	58.5	58.9	59.2	60.2	60.5	57.2
Service-producing	126.7	128.4	129.4	131.1	127.9	130.1	130.7	132.2	131.9	132.3
Transportation and public utilities	105.4	107.4	107.9	108.0	106.8	108.2	108.7	109.9	110.1	109.4
Wholesale trade	119.3	117.8	118.1	118.5	120.6	119.2	119.6	120.3	119.8	119.8
Retail trade	115.4	116.2	117.3	120.5	118.1	119.2	120.1	122.4	122.0	123.1
Finance, insurance, and real estate	134.8	140.2	140.5	142.1	135.4	140.7	141.3	141.8	141.9	142.7
Services	144.1	146.8	148.1	149.6	144.2	148.2	148.4	149.7	149.5	149.7

[1] See footnote 1, table B-2.

p = preliminary.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1985	52.4	47.8	53.8	49.2	51.6	47.0	56.2	56.8	50.8	61.9	57.6	59.5
	1986	59.7	53.5	45.1	54.1	49.2	46.2	54.6	54.3	54.9	55.1	62.7	62.4
	1987	51.6	60.8	p52.2	p59.2								
Over 3-month span	1985	51.1	49.7	46.2	46.2	45.1	51.4	49.7	51.1	55.1	55.9	51.4	60.5
	1986	58.1	54.3	51.1	49.7	48.4	44.9	47.3	54.1	54.9	62.4	65.1	65.0
	1987	60.5	p56.8	p60.8									
Over 6-month span	1985	49.2	47.8	43.0	45.9	44.3	44.3	48.9	50.8	54.1	57.0	57.0	55.9
	1986	53.8	53.8	47.6	45.9	45.9	48.6	49.7	55.4	61.1	60.5	61.1	p61.1
	1987	p64.9											
Over 12-month span	1985	46.2	45.7	46.8	43.8	44.9	47.3	47.6	48.9	47.3	49.5	48.9	48.6
	1986	50.3	51.1	52.2	52.4	52.7	54.6	53.5	54.3	p57.3	p57.0		
	1987												

[1] Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.

p = preliminary.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans.

Senator **Sarbanes**. Well, thank you very much, Commissioner.

I have a couple of definitional questions first. How is "adult" defined when you talk about the jobless rates for adult men and women?

Mrs. **Norwood**. Twenty years and over.

Senator **Sarbanes**. I take it that for that age group the unemployment rate now for men is 5.5. percent and separately for women is 5.5 percent.

Mrs. **Norwood**. That's correct.

Senator **Sarbanes**. The unemployment rate among black workers seems to have fallen more rapidly since February than for other groups.

Is that decline statistically significant and is there an explanation for it?

Mrs. **Norwood**. The unemployment rate for the black workers needs to be a little more than nine-tenths of a percent in a single month to be statistically significant.

Over the last several months, there clearly has been an improvement for black workers, but, of course, their unemployment rate has been extraordinarily high. Their rate fell this past month from 13.9 percent to 13.0 percent in January and February.

Senator **Sarbanes**. Now do you have any theory on why this is happening?

Mrs. **Norwood**. Well, I would like to believe that it's because of job growth and that that is being shared now by more people in the economy.

I am concerned, nevertheless, that the unemployment rates, even though improved over the past year for the black and the Hispanic population, remain fairly high.

Senator **Sarbanes**. Now that rate is for—when we say 13 percent for blacks——

Mrs. **Norwood**. That's the total black population. If you look at the individual groups, there are some significant differences. The rate for black teenagers is extraordinarily high. It's in the 38 percent range.

Senator **Sarbanes**. And do you have it separately for adult black men and adult black women?

Mrs. **Norwood**. Yes. It's 10.9 percent for black men 20 years and over and 11.5 percent for black women 20 years and over, and then it's 38 percent for black teenagers.

Senator **Sarbanes**. And do you have the same figures for Hispanics?

Mrs. **Norwood**. No. All that I have for the Hispanics is the overall rate. That's a smaller group of the population and we really need to use annual average data, which we can supply to you, to have further breakdowns.

Senator **Sarbanes**. If you would do that, we would appreciate it.

Mrs. **Norwood**. We'd be glad to. They generally fall in between the black and the white.

Senator **Sarbanes**. In your statement this morning you pointed out that most of the decline in unemployment occurred among workers who had been jobless for a short period of time, while long-term unemployment remained quite high.

Mrs. **Norwood**. That's quite right.

Senator **Sarbanes**. I understand that in Europe, where unemployment has been more severe than here in recent years, there's a growing concern that employers are simply refusing to hire those who have been out of work for a year or more on the assumption that they have lost their job skills. That's an issue that's now apparently being debated there.

Do your figures suggest that the same phenomenon is occurring in the United States, that we are increasingly structuring a permanent class of unemployable individuals?

Mrs. **Norwood**. I'm not sure that it is a matter of losing job skills. I am sure that 1,100,000 out of work for more than 6 months suggest that they are in some very real difficulty.

There are, of course, some specific geographic problems that we have. They tend to be concentrated in central cities. They tend to be heavily minority. They have different experiences in different industries which also exacerbates the geographic problem.

So I'm not sure that it's entirely a training problem, though clearly that is important.

Senator **Sarbanes**. Thank you.

Congressman Wylie.

Representative **Wylie**. Thank you very much, Mr. Chairman.

Clearly, you have brought us good news this morning for which we are all very pleased.

Is this decline in unemployment soft or would you say it's fairly firm?

Mrs. **Norwood**. Well, I always look at the data and try to report them as best I can. There has been, I believe, extraordinarily vigorous employment growth.

We did have a little bit later survey week this month and that may possibly have brought a little of the employment that the seasonal adjustment process would normally pick up next month into this month.

But my belief is that if that happened, it would be a relatively small amount and that we would still have very vigorous employment growth even so.

Representative **Wylie**. Much of the unemployment that we've experienced over the last several months—maybe 2 or 3 years back—was in the manufacturing employment area.

Mrs. **Norwood**. Yes.

Representative **Wylie**. And I noticed that that's down considerably for the April figures.

Does that seem to be fairly firm to you? This is a big area of unemployment—or it was at one time, and caused the big unemployment figure that we first say.

Would you care to comment on what impact that might have?

Mrs. **Norwood**. It's quite clear that factory employment doesn't seem to be going anywhere. It has been relatively unchanged, with slight upticks and slight downticks, over the past year. Very little has happened over the past year and over the course of the recovery period, the 53 months of the recovery period, we have really recovered only about half of the employment that we lost in manufacturing.

Now we're talking about employment I want to emphasize, and not about output. Output has remained relatively high in manufacturing. We are just producing more with fewer employees.

Representative WYLIE. Now Senator Sarbanes touched on the statistics as they relate to geography. You have in your cover sheet here—let's see, it says "Household Data Table A-13," and it indicates in Illinois that the unemployment rate is about 8.2 percent, whereas in New Jersey—and I'm just trying to figure out how to compare these—the unemployment rate is 3.9 percent.

Is unemployment more than twice as much in Illinois than it is in New Jersey or is that just a comparison figure with the number of persons who are employable in New Jersey?

Mrs. NORWOOD. Unemployment, according to those figures, is higher in Illinois than in New Jersey and I would expect it to be higher in Illinois than in New Jersey because of the industrial structure of the economy in Illinois.

I would point out to you that there are larger errors surrounding—or wider confidence band surrounding—the data for each of the States. You will note that Texas had an increase in unemployment and that many of the others seem to be relatively stable, going up or down a little bit, within the band of statistical confidence.

I think what we are seeing is a fairly widespread drop in unemployment, which is not concentrated in any particular place, but there are marked differences by locality in this country and, as I've said many times here, I believe that they are getting larger in some ways, that the industrial restructuring that's occurring in this country should make us pay a great deal more attention than we have in the past to differences in geography.

Representative WYLIE. Okay. Well, I'm especially interested in my own home State of Ohio and I noticed that the unemployment rate has dropped by three-tenths of a percentage point, which is a pretty healthy drop I guess. I wouldn't expect you to know from a statistical standpoint what happened in all the 50 States, but can you tell me how that decline is reflected in Ohio?

Mrs. NORWOOD. Well, in Ohio, there has been a sizable drop in unemployment over the last year. The drop in unemployment this month is within the bound of statistical error, so it probably is not very much of a change.

There has been some increase in employment and a relatively small increase in the labor force in Ohio. So things look fairly optimistic.

Representative WYLIE. Okay. I was taken with your statement where you say that many product areas are heavily influenced by imports and had substantial annual rates of increase in the first quarter. For example, wine, apparel, and jewelry.

Is there any linking with imports that can explain this?

Mrs. NORWOOD. It's very hard to link product by product. In our micro data and data that are on import prices, all that we have been able to do is to pick out some commodity areas that clearly are known to be very much affected by imports in which a large part of domestic sales are imports, and look at what has happened to their prices. And that's really essentially what we were doing.

One must be careful, too, to look not just at the prices of imported commodities in this country, but also at domestically produced commodities that compete with imports. As prices of imports go up, there is more of an opportunity for domestic manufacturers to consider what they will do with their price levels and still remain competitive.

So we can expect a variety of things to go on there. But it is an extremely hazardous place to do a lot of analysis at this point. We are beginning to see some effects and I thought it was important to point that out.

Representative WYLIE. I'm not sure that I got the full import of that, but you say that domestic producers are raising their prices vis-a-vis some of these products?

Mrs. NORWOOD. Yes. I'm saying there are two effects that we can expect to see. One is that as the value of the dollar falls, the prices of a product imported from another country, particularly from Japan and some other countries whose currencies are affected by the value of the dollar, would go up. That's the price of the imported product itself.

The other side of that is to look at the competitive situation that a domestic manufacturer finds himself in, and if he finds that his competitors have higher prices, then he has more of an opportunity to consider where he is going to put his prices and has an opportunity to decide whether he wants to try to go out to get more of the market share or whether he wants to increase his own profit margins.

Those are decisions which individual businessmen will be making as we go through the next several months.

Representative WYLIE. It could have an impact on employment?

Mrs. NORWOOD. Yes.

Representative WYLIE. Well, one other observation I would like to make then is that this kind of places us in the horns of a dilemma. We hear all the talk about our trade imbalance, $170 billion deficit, and we need to do something about that, but here is a statistic which indicates that maybe in some areas at least imports are creating American jobs.

Mrs. NORWOOD. Oh, yes. Imports are not always a source of job decline. It seems to me that we are getting into a much better position to really position ourselves to increase our share of export markets. That's what's really needed if we're going to keep the employment levels in manufacturing rising.

Representative WYLIE. What are the fastest growing occupational categories over the last 12 months?

Mrs. NORWOOD. Well, they have generally been the professional, technical and management occupations.

Representative WYLIE. Are the jobs generally in the poor-paying sectors? We hear that they are.

Mrs. NORWOOD. The jobs tend to be in the occupations which in the past have paid more. They are spread out among industries.

Certainly one of the fastest growing industries has been what we call eating and drinking places, otherwise known as restaurants, and many of those are rather low-paying jobs clearly. But there are many others in the service-producing sector that are high-paying jobs.

Representative Wylie. Thank you.

Thank you, Mr. Chairman.

Senator Sarbanes. Commissioner, thank you very much. We appreciate your testimony and we appreciate your colleagues accompanying you and we look forward to seeing you next month.

Mrs. Norwood. Thank you.

Senator Sarbanes. The committee stands adjourned.

[Whereupon, at 10:05 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, JUNE 5, 1987

Congress of the United States,
Joint Economic Committee,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-628, Dirksen Senate Office Building, Hon. William Proxmire (member of the committee) presiding.

Present: Senator Proxmire.

Also present: Judith Davison, executive director; and William R. Buechner and Christopher J. Frenze, professional staff members.

OPENING STATEMENT OF SENATOR PROXMIRE, PRESIDING

Senator **Proxmire**. The hearing will come to order. On behalf of the members of the Joint Economic Committee, I would like to welcome Commissioner Janet Norwood before the committee this morning to testify on the employment and unemployment figures for May 1987.

Today the Bureau of Labor Statistics is releasing revised payroll employment data that show slower job growth during the past 2 years than was originally reported. These figures will give us a much better picture of how the economy has been performing during the past 2 years and may clear up the inconsistency that many have seen between the slow growth reported in the GNP figures and the strong job growth reported by BLS. I hope Commissioner Norwood will discuss this in her prepared statement, but if not, it can be addressed during the question period.

The unemployment figures for May show no change from April. The only major changes occurred for blacks, whose unemployment rate returned to the March level after a significant decline in April, and for Hispanics, where the unemployment rate declined to 8.7 percent. The labor force and household employment rose by more than 600,000 in May after seasonal adjustment, both much larger than normal. By contrast, payroll employment rose only 123,000, all in the service-producing sectors. Weekly hours were up, with large increases in manufacturing.

Representative McMillan is unable to attend today's hearing and has requested that his opening statement be included; which I will do at this point, without objection.

[The written opening statement of Representative McMillan follows:]

WRITTEN OPENING STATEMENT OF REPRESENTATIVE McMILLAN

It gives me great pleasure to welcome Commissioner Norwood here this morning. This morning Commissioner Norwood once again brings us very good news. April's plunge in the civilian unemployment rate has been sustained, and its level stands at 6.3 percent. This is the lowest rate of unemployment since March 1980.

During May employment gains were also impressive, with the household survey posting an increase of 600,000. Even if this may be somewhat overstated, the strong employment performance indicates economic strength. The recent employment data certainly do not support those who constantly voice pessimism about the economic outlook.

Another encouraging sign is the rise in the employment-population ratio, an important measure of our economy's ability to create enough jobs. The May increase brings the level of the E-P ratio up to 61.6 percent, an alltime record high.

With this expansion now entering its 55th month, it is already the second longest peacetime recovery since World War II. During this upswing over 13 million jobs have been created. With economic growth continuing, we may look forward to solid employment gains in the months to come. This will provide expanded opportunities for all of our citizens, especially the less fortunate. Thank you, Mr. Chairman.

Senator **PROXMIRE**. The committee will now turn to Commissioner Norwood for her analysis of the employment and unemployment data for May.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS

Mrs. **NORWOOD**. Thank you very much, Mr. Chairman. It is always a pleasure to be here. The labor market improvements of recent months held in May. Increases occurred both in the labor force and in employment, while the number of unemployed persons in May was the same as in April. Both the overall jobless rate and the civilian rate—at 6.2 and 6.3 percent, respectively—were unchanged. Both rates were about 1 percentage point lower than a year ago.

May 1987 marks the 4½ year point in the current economic expansion. The civilian worker jobless rate has fallen during this period, but the pace of the decline has varied. The rate fell steeply during the first 2 years of the recovery, dropping by 3.6 percentage points from its high of 10.8 percent in November 1982. As usually occurs during the course of a recovery, the decline then slowed down; from November 1984 to November 1986, the unemployment rate edged down only three-tenths of a point—to 6.9 percent. Over the last 6 months, however, the pace of decline in unemployment picked up, with the rate dropping by 0.6 point since November of last year.

Most of this recent decrease has occurred among adults, both men and women. The jobless rate for teenagers—at 17.7 percent in May—has shown little improvement in the last 6 months. Over this same period the rate for whites fell, but that for blacks has displayed no clear pattern. Joblessness among persons of Hispanic origin has dropped. In May their rate was below 9 percent for the first time since early 1980.

Total civilian employment, as measured by the household survey, showed an unusually large increase in May—about 600,000—and the labor force rose by about the same amount. A large part of the increase occurred among adult women. Even though employment normally increases strongly between April and May as outdoor activity picks up and young people enter the labor market, the size of the April-to-May change is probably somewhat exaggerated.

Payroll employment, as measured by the business survey, rose by only 125,000 in May. This change, however, followed much larger job gains during the first 4 months of this year. All of the May increase occurred in the service-producing sector. The services industry itself continued to expand, adding about 100,000 jobs, and the finance, insurance, and real estate industry also continued its long-term job gain.

As has been the case for several months, factory employment was unchanged over the month. However, the factory work week rebounded strongly in May from the holiday-induced April decline. Overtime in manufacturing rose simply, to 3.8 hours, the highest level since the spring of 1978.

I want to call your attention to the fact that these data from our business survey reflect the usual benchmark adjustment as well as updated seasonal factors. BLS practice each year is to adjust the establishment survey estimates to the comprehensive employment counts from the unemployment insurance tax records for the preceding year. The revisions this year were larger than usual; they have brought the trend in the payroll survey estimates closer to that of the household survey. The current levels of payroll employment have been reduced by about 700,000, or by 0.7 percent. The largest revisions downward were in manufacturing and in wholesale and retail trade.

In summary, the data released this morning corroborate the labor market improvements of the last few months. The April jobless rate drop was sustained in May and employment in the service-producing sector continued to increase.

Mr. Chairman, my colleagues, Mr. Dalton and Mr. Plewes, and I will try to answer any questions.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unad-justed rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1986									
May.........	7.0	7.2	7.2	7.2	7.2	7.2	7.2	7.2	-
June........	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	-
July........	7.0	7.0	7.0	7.0	7.0	6.9	7.0	7.0	.1
August......	6.7	6.8	6.8	6.8	6.8	6.9	7.0	6.8	.2
September...	6.8	7.0	7.0	7.0	7.0	7.0	7.0	7.0	-
October.....	6.6	6.9	6.9	6.9	7.0	6.9	6.9	7.0	.1
November....	6.6	6.9	6.9	6.9	6.9	6.9	7.0	7.0	.1
December....	6.3	6.7	6.7	6.7	6.6	6.7	6.7	6.7	.1
1987									
January.....	7.3	6.7	6.7	6.7	6.7	6.8	6.6	6.7	.2
February....	7.2	6.7	6.7	6.6	6.6	6.7	6.5	6.7	.2
March.......	6.9	6.6	6.6	6.6	6.6	6.6	6.5	6.6	.1
April.......	6.2	6.3	6.3	6.3	6.4	6.3	6.3	6.3	.1
May.........	6.1	6.3	6.3	6.3	6.4	6.3	6.4	6.3	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
June 1987

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1975 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1985 would be based, during 1985, on the adjustment of data from the period January 1975 through January 1985.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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THE EMPLOYMENT SITUATION: MAY 1987

Employment rose in May and the unemployment rate was unchanged, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. Following a marked decline in April, the overall unemployment rate remained at 6.2 percent and the civilian worker rate at 6.3 percent. Both were nearly a percentage point lower than a year earlier.

Total civilian employment--as estimated through the monthly survey of households--showed an increase of about 600,000, seasonally adjusted, whereas nonagricultural payroll employment--as measured by the monthly survey of establishments--rose by 125,000.

Unemployment (Household Survey Data)

The civilian unemployment rate was unchanged at 6.3 percent in May, and the number of persons unemployed remained at 7.5 million, about 800,000 less than a year earlier. The unemployment rates for adult men (5.5 percent) and women (5.4 percent), while unchanged over the month, have dropped substantially during the last year. The unemployment rates for teenagers (17.7 percent), whites (5.3 percent), and Hispanics (8.7 percent) were little changed, although the Hispanic rate has fallen 2 percentage points so far this year. The jobless rate for blacks (13.8 percent) returned to its March level after falling in April. (See tables A-2 and A-3.)

Among the unemployed, there was a small increase in May in the number seeking their first jobs. In terms of duration, there was also a small increase in the number of persons unemployed for less than 5 weeks. The median duration of unemployment declined to 6.5 weeks. (See tables A-7 and A-8.)

Civilian Employment and the Labor Force (Household Survey Data)

Civilian employment rose to 112.4 million, a seasonally adjusted gain of about 600,000. Most of the increase was among adults, particularly women. The employment-population ratio--the proportion of the working age population who held jobs--increased by three-tenths of a percentage point. (See table A-2.)

The civilian labor force also showed a sharp increase (660,000), following 2 months of little change. The labor force participation rate was up three-tenths of a percentage point to 65.7 percent.

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Apr.-May change
	1986	1987	1987			
	IV	I	Mar.	Apr.	May	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/	120,308	120,943	120,958	121,070	121,719	649
Total employment 1/	112,170	112,995	113,104	113,570	114,173	603
Civilian labor force	118,558	119,202	119,222	119,335	119,993	658
Civilian employment	110,420	111,254	111,368	111,835	112,447	612
Unemployment	8,138	7,948	7,854	7,500	7,546	46
Not in labor force	62,807	62,800	62,957	63,009	62,540	-469
Discouraged workers	1,127	1,168	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	6.8	6.6	6.5	6.2	6.2	0
All civilian workers	6.9	6.7	6.6	6.3	6.3	0
Adult men	6.1	5.9	5.8	5.5	5.5	0
Adult women	6.0	5.8	5.8	5.5	5.4	-0.1
Teenagers	17.8	17.9	18.1	17.4	17.7	.3
White	6.0	5.7	5.6	5.4	5.3	-.1
Black	14.1	14.2	13.9	13.0	13.8	.8
Hispanic origin	10.2	9.7	9.0	9.2	8.7	-.5
ESTABLISHMENT DATA 2/	Thousands of jobs					
Nonfarm employment	100,397	101,133	101,329	p101,609	p101,732	p123
Goods-producing	24,634	24,733	24,749	p24,757	p24,747	p-10
Service-producing	75,773	76,399	76,580	p76,852	p76,985	p133
	Hours of work					
Average weekly hours:						
Total private	34.7	34.8	34.8	p34.7	p34.8	p0.1
Manufacturing	40.8	41.0	40.9	p40.6	p41.0	p.4
Overtime	3.5	3.6	3.6	p3.5	p3.8	p.3

1/ Includes the resident Armed Forces. N.A.=not available.

2/ Establishment data have been revised to reflect March 1986 benchmarks and updated seasonal adjustment factors.

p=preliminary.

Industry Payroll Employment (Establishment Survey Data)

The data from the establishment survey showed a relatively small job gain for May, bringing nonagricultural payroll employment to a level of 101.7 million, after seasonal adjustment. This level reflects the results of the annual benchmark adjustment of these data, which has produced a downward revision. (See the explanatory note on pages 4-5 for a description of the benchmark process.)

Gains in May were essentially limited to the services industry and in finance, insurance, and real estate. Continuing the strong growth in evidence during the current expansion, employment in the services industry rose by 95,000 in May. About half of the increase was in business and health services. Finance, insurance, and real estate also continued to expand with an over-the-month employment gain of 15,000. Employment in both wholesale and retail trade was unchanged after seasonal adjustment. (See table B-1.)

In the goods-producing sector, construction employment rose a little less than expected for this time of the year and, after seasonal adjustment, was down slightly from the April level. Mining and its oil and gas extraction component have shown small increases over the last few months. Manufacturing employment remained unchanged in May, as movements among individual industries were small and generally offsetting.

Weekly Hours (Establishment Survey Data)

The average workweek of production or nonsupervisory workers on private nonagricultural payrolls edged up 0.1 hour to 34.8 hours, seasonally adjusted, returning to the March level. In manufacturing, the workweek rose by 0.4 hour to 41.0, rebounding from the previous month's dip, which had stemmed from religious observances in the reference week. Factory overtime rose by 0.3 hour to 3.8, the highest level since April 1978. (See table B-2.)

Largely as a result of the increase in hours of work, the index of aggregate weekly hours of production or nonsupervisory workers on private nonagricultural payrolls rose by 0.4 percent to 120.1 (1977=100), seasonally adjusted. This was 2.5 percent higher than the May 1986 index. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings rose by 0.4 percent in May, while average weekly earnings rose 0.7 percent, seasonally adjusted. Prior to seasonal adjustment, hourly earnings increased by 2 cents to $8.92, and weekly earnings were up $2.48 to $310.42. (See table B-3.)

The Hourly Earnings Index (Establishment Survey Data)

The Hourly Earnings Index (HEI) was 172.6 (1977=100) in May, seasonally adjusted, essentially unchanged from April. For the 12 months ended in May, the increase was 2.2 percent. The HEI excludes the effects of two types of changes unrelated to underlying wage rate movements--fluctuations in manufacturing overtime and interindustry employment shifts. In dollars of constant purchasing power, the HEI decreased 1.3 percent during the 12-month period ended in April. (See table B-4.)

Revisions in the Establishment Survey Data

In accordance with annual practice, the establishment survey data published in this release have been revised to reflect complete counts of employment (benchmarks). The counts are principally derived from unemployment insurance tax records for the first quarter of 1986. In addition, new seasonal adjustment factors have been calculated to take account of the experience through March 1987.

The effects of these adjustments on current data are shown in table B, which presents data prior to seasonal adjustment for February 1987, the last month of final published estimates prior to this benchmark revision.

To reflect these changes, establishment data series have been revised from April 1985 forward, and seasonally adjusted series have been revised back to January 1982. The June 1987 issue of Employment and Earnings will contain a discussion of the effects of the benchmark, seasonal adjustment factors for use in the ensuing 12-month period, and revised data for all regularly published tables containing national establishment survey data on employment, hours, and earnings. All of the revised historical series will be published in a special supplement to Employment and Earnings, which is expected to be issued in about a month. This supplement, when combined with the historical volume, Employment, Hours, and Earnings, United States, 1909-84, Bulletin 1312-12, will comprise the full historical series on national data from the establishment survey.

The Employment Situation for June 1987 will be released on Thursday, July 2, at 8:30 A.M. (EDT).

Table B. Establishment survey employment estimates for February 1987, not seasonally adjusted

(In thousands)

Industry	February 1987 employment estimates		Difference
	As revised	Before revision	
Total nonfarm employment	99,792	100,494	-702
Total private	82,587	83,316	-729
Mining	713	723	-10
Construction	4,506	4,559	-53
Manufacturing	18,853	19,061	-208
Transportation and public utilities	5,252	5,321	-69
Wholesale trade	5,707	5,827	-120
Retail trade	17,644	17,872	-228
Finance, insurance, and real estate	6,438	6,462	-24
Services	23,474	23,491	-17
Government	17,205	17,178	27
Federal	2,897	2,897	-
State	4,020	4,072	-52
Local	10,288	10,209	79

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 59,500 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 290,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed,* regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. The January revision is applied to data that have been published over the previous 5 years. For the establishment survey, updated factors for seasonal adjustment are calculated only once a year, along with the introduction of new benchmarks which are discussed at the end of the next section.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 328,000; for total unemployment it is 220,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .26 percentage point; for teenagers, it is 1.25 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $22.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	May 1986	Apr. 1987	May 1987	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987	May 1987
TOTAL									
Noninstitutional population[2]	181,998	184,079	184,259	181,998	183,575	183,738	183,915	184,079	184,259
Labor force[2]	118,886	120,082	121,421	119,274	120,782	121,089	120,958	121,070	121,719
Participation rate[3]	65.3	65.2	65.9	65.5	65.8	65.9	65.8	65.8	66.1
Total employed[2]	110,728	112,776	114,103	110,852	112,759	113,122	113,104	113,570	114,173
Employment-population ratio[4]	60.8	61.3	61.9	60.9	61.4	61.6	61.5	61.7	62.0
Resident Armed Forces	1,687	1,735	1,726	1,687	1,748	1,740	1,736	1,735	1,726
Civilian employed	109,041	111,041	112,377	109,165	111,011	111,382	111,368	111,835	112,447
Agriculture	3,347	3,223	3,541	3,151	3,145	3,236	3,284	3,290	3,335
Nonagricultural industries	105,695	107,817	108,836	106,014	107,866	108,146	108,084	108,545	109,112
Unemployed	8,158	7,306	7,318	8,422	8,023	7,967	7,854	7,500	7,546
Unemployment rate[5]	6.9	6.1	6.0	7.1	6.6	6.6	6.5	6.2	6.2
Not in labor force	63,112	63,997	62,838	62,724	62,793	62,649	62,957	63,009	62,540
Men, 16 years and over									
Noninstitutional population[2]	87,195	88,271	88,361	87,195	88,020	88,099	88,186	88,271	88,361
Labor force[2]	66,721	66,994	67,738	66,854	67,672	67,764	67,644	67,603	67,816
Participation rate[3]	76.5	75.9	76.7	76.7	76.9	76.9	76.7	76.6	76.7
Total employed[2]	62,262	62,811	63,660	62,201	63,187	63,335	63,282	63,417	63,562
Employment-population ratio[4]	71.4	71.2	72.0	71.3	71.8	71.9	71.8	71.8	71.9
Resident Armed Forces	1,533	1,575	1,566	1,533	1,591	1,584	1,575	1,575	1,566
Civilian employed	60,729	61,236	62,094	60,668	61,596	61,751	61,707	61,842	61,996
Unemployed	4,460	4,185	4,078	4,653	4,484	4,429	4,362	4,186	4,254
Unemployment rate[5]	6.7	6.2	6.0	7.0	6.6	6.5	6.4	6.2	6.3
Women, 16 years and over									
Noninstitutional population[2]	94,803	95,808	95,898	94,803	95,556	95,639	95,729	95,808	95,898
Labor force[2]	52,165	53,085	53,683	52,420	53,110	53,325	53,314	53,467	53,903
Participation rate[3]	55.0	55.4	56.0	55.3	55.6	55.8	55.7	55.8	56.2
Total employed[2]	48,466	49,965	50,443	48,651	49,572	49,787	49,822	50,153	50,611
Employment-population ratio[4]	51.1	52.2	52.6	51.3	51.9	52.1	52.0	52.3	52.8
Resident Armed Forces	154	160	160	154	157	156	161	160	160
Civilian employed	48,312	49,805	50,283	48,497	49,415	49,631	49,661	49,993	50,451
Unemployed	3,698	3,120	3,240	3,769	3,538	3,538	3,492	3,314	3,292
Unemployment rate[5]	7.1	5.9	6.0	7.2	6.7	6.6	6.6	6.2	6.1

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[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	May 1986	Apr. 1987	May 1987	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987	May 1987
TOTAL									
Civilian noninstitutional population	180,311	182,344	182,533	180,311	181,827	181,998	182,179	182,344	182,533
Civilian labor force	117,199	118,347	119,695	117,587	119,034	119,349	119,222	119,335	119,993
Participation rate	65.0	64.9	65.6	65.2	65.5	65.6	65.4	65.4	65.7
Employed	109,041	111,041	112,377	109,165	111,011	111,382	111,368	111,835	112,447
Employment-population ratio[2]	60.5	60.9	61.6	60.5	61.1	61.2	61.1	61.3	61.6
Unemployed	8,158	7,306	7,318	8,422	8,023	7,967	7,854	7,500	7,546
Unemployment rate	7.0	6.2	6.1	7.2	6.7	6.7	6.6	6.3	6.3
Men, 20 years and over									
Civilian noninstitutional population	78,387	79,387	79,474	78,387	79,132	79,216	79,303	79,387	79,474
Civilian labor force	61-102	61,660	62,147	61,153	61,948	61,973	61,983	61,976	62,156
Participation rate	77.9	77.7	78.2	78.0	78.3	78.2	78.2	78.1	78.2
Employed	57,412	58,159	58,828	57,338	58,227	58,325	58,410	58,567	58,721
Employment-population ratio[2]	73.2	73.3	74.0	73.1	73.6	73.6	73.7	73.8	73.9
Agriculture	2,378	2,397	2,548	2,279	2,254	2,300	2,411	2,411	2,441
Nonagricultural industries	55,034	55,762	56,280	55,059	55,974	56,024	55,999	56,155	56,280
Unemployed	3,690	3,501	3,319	3,820	3,720	3,648	3,573	3,409	3,436
Unemployment rate	6.0	5.7	5.3	6.2	6.0	5.9	5.8	5.5	5.5
Women, 20 years and over									
Civilian noninstitutional population	87,444	88,395	88,464	87,444	88,150	88,237	88,321	88,395	88,464
Civilian labor force	48,353	49,346	49,725	48,433	49,161	49,348	49,355	49,466	49,774
Participation rate	55.3	55.8	56.2	55.4	55.8	55.9	55.9	56.0	56.3
Employed	45,331	46,767	47,104	45,335	46,261	46,475	46,498	46,751	47,094
Employment-population ratio[2]	51.8	52.9	53.2	51.3	52.5	52.7	52.6	52.9	53.2
Agriculture	656	557	690	604	628	641	589	587	634
Nonagricultural industries	44,675	46,210	46,414	44,731	45,633	45,835	45,909	46,164	46,460
Unemployed	3,022	2,579	2,621	3,053	2,900	2,873	2,857	2,715	2,680
Unemployment rate	6.2	5.2	5.3	6.4	5.9	5.8	5.8	5.5	5.4
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,480	14,562	14,595	14,480	14,545	14,546	14,555	14,562	14,595
Civilian labor force	7,744	7,341	7,823	7,956	7,926	8,028	7,884	7,894	8,063
Participation rate	53.5	50.4	53.6	55.2	54.5	55.2	54.2	54.2	55.2
Employed	6,298	6,115	6,445	6,492	6,524	6,582	6,460	6,518	6,633
Employment-population ratio[2]	43.5	42.0	44.2	44.8	44.9	45.2	44.4	44.8	45.4
Agriculture	313	269	303	268	264	295	284	292	261
Nonagricultural industries	5,985	5,845	6,142	6,224	6,260	6,287	6,176	6,226	6,372
Unemployed	1,446	1,226	1,378	1,504	1,402	1,446	1,424	1,376	1,430
Unemployment rate	18.7	16.7	17.6	18.8	17.7	18.0	18.1	17.4	17.7

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	May 1986	Apr. 1987	May 1987	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987	May 1987
WHITE									
Civilian noninstitutional population	155,236	156,676	156,811	155,236	156,313	156,431	156,561	156,676	156,811
Civilian labor force	101,202	102,168	103,271	101,531	102,746	102,893	102,797	102,894	103,573
Participation rate	65.2	65.2	65.9	65.4	65.7	65.8	65.7	65.7	66.1
Employed	95,142	96,744	97,908	95,283	96,717	96,995	96,998	97,340	98,050
Employment-population ratio[2]	61.3	61.7	62.4	61.4	61.9	62.0	62.0	62.1	62.5
Unemployed	6,060	5,423	5,363	6,248	6,029	5,898	5,799	5,554	5,524
Unemployment rate	6.0	5.3	5.2	6.2	5.9	5.7	5.6	5.4	5.3
Men, 20 years and over									
Civilian labor force	53,497	53,374	54,282	53,532	54,182	54,175	54,107	54,051	54,314
Participation rate	78.3	78.0	78.6	78.4	78.7	78.6	78.4	78.3	78.6
Employed	50,689	51,205	51,807	50,628	51,297	51,362	51,364	51,462	51,755
Employment-population ratio[2]	74.2	74.2	75.0	74.1	74.5	74.5	74.5	74.6	74.9
Unemployed	2,809	2,669	2,474	2,904	2,885	2,813	2,743	2,589	2,558
Unemployment rate	5.2	5.0	4.6	5.4	5.3	5.2	5.1	4.8	4.7
Women, 20 years and over									
Civilian labor force	41,004	41,877	42,151	41,103	41,680	41,762	41,828	41,982	42,239
Participation rate	54.6	55.3	55.6	54.8	55.2	55.2	55.3	55.5	55.8
Employed	38,814	40,041	40,303	38,854	39,568	39,735	39,839	40,041	40,343
Employment-population ratio[2]	51.7	52.9	53.2	51.8	52.4	52.6	52.7	52.9	53.2
Unemployed	2,190	1,836	1,848	2,249	2,111	2,028	1,989	1,941	1,895
Unemployment rate	5.3	4.4	4.4	5.5	5.1	4.9	4.8	4.6	4.5
Both sexes, 16 to 19 years									
Civilian labor force	6,700	6,417	6,838	6,896	6,885	6,955	6,862	6,861	7,021
Participation rate	56.4	53.7	57.2	58.1	57.8	58.4	57.5	57.4	58.7
Employed	5,639	5,498	5,798	5,801	5,852	5,898	5,795	5,837	5,951
Employment-population ratio[2]	47.5	46.0	48.5	48.8	49.2	49.5	48.5	48.9	49.8
Unemployed	1,061	918	1,041	1,095	1,033	1,057	1,067	1,024	1,070
Unemployment rate	15.8	14.3	15.2	15.9	15.0	15.2	15.5	14.9	15.2
Men	15.9	15.9	16.3	17.0	16.1	16.0	17.1	16.7	17.3
Women	15.8	12.7	14.1	14.7	13.8	14.3	13.9	13.1	13.1
BLACK									
Civilian noninstitutional population	19,943	20,279	20,312	19,943	20,187	20,218	20,249	20,279	20,312
Civilian labor force	12,713	12,639	12,861	12,721	12,831	12,957	12,844	12,743	12,860
Participation rate	63.7	62.3	63.3	63.8	63.6	64.1	63.4	62.8	63.3
Employed	10,872	11,024	11,119	10,839	10,997	11,101	11,053	11,090	11,080
Employment-population ratio[2]	54.5	54.4	54.7	54.3	54.5	54.9	54.6	54.7	54.6
Unemployed	1,840	1,615	1,742	1,882	1,833	1,855	1,791	1,653	1,779
Unemployment rate	14.5	12.8	13.5	14.8	14.3	14.3	13.9	13.0	13.8
Men, 20 years and over									
Civilian labor force	5,938	5,958	6,051	5,924	5,986	6,012	5,997	5,980	6,033
Participation rate	75.3	74.2	75.2	75.1	74.9	75.1	74.8	74.4	75.0
Employed	5,189	5,275	5,311	5,161	5,256	5,288	5,305	5,328	5,279
Employment-population ratio[2]	65.8	65.7	66.0	65.4	65.7	66.0	66.1	66.3	65.6
Unemployed	749	683	740	763	730	724	692	652	754
Unemployment rate	12.6	11.5	12.2	12.9	12.2	12.0	11.5	10.9	12.5
Women, 20 years and over									
Civilian labor force	5,896	5,912	5,991	5,876	5,984	6,030	5,987	5,918	5,970
Participation rate	59.4	58.6	59.3	59.2	59.6	59.9	59.4	58.7	59.1
Employed	5,146	5,259	5,294	5,130	5,221	5,255	5,211	5,238	5,278
Employment-population ratio[2]	51.9	52.1	52.4	51.7	52.0	52.2	51.7	51.9	52.2
Unemployed	750	653	697	746	763	775	776	680	691
Unemployment rate	12.7	11.1	11.6	12.7	12.8	12.9	13.0	11.5	11.6
Both sexes, 16 to 19 years									
Civilian labor force	879	769	819	921	860	915	861	845	857
Participation rate	41.2	35.6	37.9	43.2	40.1	42.6	40.0	39.2	39.7
Employed	537	490	514	548	520	559	537	524	523
Employment-population ratio[2]	25.2	22.7	23.8	25.7	24.2	26.0	24.9	24.3	24.2
Unemployed	342	279	305	373	340	356	324	321	334
Unemployment rate	38.9	36.3	37.3	40.5	39.5	38.9	37.6	38.0	39.0
Men	38.5	36.1	38.0	40.5	36.5	38.3	36.5	39.3	40.3
Women	39.4	36.4	36.5	40.5	43.2	39.5	38.8	36.5	37.6
HISPANIC ORIGIN									
Civilian noninstitutional population	12,290	12,770	12,809	12,290	12,653	12,692	12,732	12,770	12,809
Civilian labor force	7,925	8,415	8,506	8,006	8,431	8,457	8,392	8,484	8,586
Participation rate	64.5	65.9	66.4	65.1	66.6	66.6	65.9	66.4	67.0
Employed	7,095	7,678	7,791	7,136	7,538	7,644	7,639	7,701	7,838
Employment-population ratio[2]	57.7	60.1	60.8	58.1	59.6	60.2	60.0	60.3	61.2
Unemployed	830	737	715	870	893	813	753	783	748
Unemployment rate	10.5	8.8	8.4	10.9	10.6	9.6	9.0	9.2	8.7

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[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(Numbers in thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	May 1986	Apr. 1987	May 1987	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987	May 1987
CHARACTERISTIC									
Civilian employed, 16 years and over	109,041	111,841	112,377	109,165	111,011	111,382	111,368	111,835	112,447
Married men, spouse present	39,733	39,887	40,189	39,582	40,102	39,913	40,100	39,967	40,029
Married women, spouse present	26,947	28,157	28,410	27,016	27,525	27,817	27,965	28,213	28,495
Women who maintain families	5,855	6,020	6,051	5,734	5,985	5,986	5,933	5,972	5,921
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,618	1,618	1,846	1,489	1,650	1,647	1,739	1,589	1,695
Self-employed workers	1,528	1,452	1,501	1,472	1,370	1,454	1,418	1,505	1,442
Unpaid family workers	200	162	194	177	136	126	150	175	170
Nonagricultural industries:									
Wage and salary workers	97,707	99,495	100,475	98,047	99,550	99,748	99,834	100,112	100,834
Government	16,537	16,748	16,910	16,333	16,412	16,532	16,568	16,484	16,710
Private industries	81,169	82,747	83,566	81,714	83,138	83,216	83,265	83,628	84,124
Private households	1,257	1,223	1,265	1,261	1,269	1,204	1,227	1,266	1,266
Other industries	79,912	81,524	82,301	80,453	81,869	82,012	82,038	82,362	82,858
Self-employed workers	7,707	8,052	8,093	7,793	8,192	8,107	8,050	8,117	8,142
Unpaid family workers	230	270	268	235	246	255	273	268	275
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,645	5,030	5,139	5,825	5,505	5,780	5,456	5,391	5,282
Slack work	2,513	2,269	2,184	2,608	2,473	2,535	2,440	2,322	2,223
Could only find part-time work	2,722	2,485	2,861	2,843	2,695	2,828	2,698	2,746	2,665
Voluntary part time	14,511	14,943	15,243	13,883	14,170	14,061	14,167	13,862	14,573
Nonagricultural industries:									
Part time for economic reasons	5,406	4,783	4,898	5,569	5,201	5,459	5,164	5,110	5,029
Slack work	2,404	2,092	2,313	2,485	2,281	2,340	2,218	2,137	2,071
Could only find part-time work	2,614	2,420	2,475	2,749	2,599	2,742	2,595	2,662	2,594
Voluntary part time	13,996	14,431	14,660	13,412	13,750	13,597	13,682	13,399	14,069

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1986				1987	1987		
	I	II	III	IV	I	Mar.	Apr.	May
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.8
U-2 Job losers as a percent of the civilian labor force	3.6	3.5	3.4	3.3	3.3	3.2	3.1	3.0
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force	5.5	5.5	5.4	5.4	5.1	5.1	4.8	4.8
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	6.7	6.8	6.6	6.5	6.3	6.2	5.9	5.9
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	7.0	7.0	6.8	6.8	6.6	6.5	6.2	6.2
U-5b Total unemployed as a percent of the civilian labor force	7.1	7.1	6.9	6.9	6.7	6.6	6.3	6.3
U-6 Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons as a percent of the civilian labor force less ½ of the part-time labor force	9.4	9.6	9.3	9.2	9.0	8.9	8.5	8.5
U-7 Total full-time jobseekers plus ½ part-time jobseekers plus ½ total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less ½ of the part-time labor force	10.4	10.5	10.2	10.2	10.0	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	May 1986	Apr. 1987	May 1987	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987	May 1987
CHARACTERISTIC									
Total, 16 years and over	8,422	7,500	7,546	7.2	6.7	6.7	6.6	6.3	6.3
Men, 16 years and over	4,653	4,186	4,254	7.1	6.8	6.7	6.6	6.3	6.4
Men, 20 years and over	3,826	3,409	3,436	6.2	6.0	5.9	5.8	5.5	5.5
Women, 16 years and over	3,769	3,314	3,292	7.2	6.7	6.7	6.6	6.2	6.1
Women, 20 years and over	3,098	2,715	2,680	6.4	5.9	5.8	5.8	5.5	5.4
Both sexes, 16 to 19 years	1,504	1,376	1,430	18.8	17.7	18.0	18.1	17.4	17.7
Married men, spouse present	1,837	1,695	1,631	4.4	4.2	4.2	4.1	4.1	3.9
Married women, spouse present	1,527	1,294	1,231	5.3	4.8	4.8	4.5	4.4	4.1
Women who maintain families	641	610	630	10.1	9.8	9.5	9.7	9.3	9.6
Full-time workers	6,924	6,018	6,052	6.9	6.4	6.3	6.2	5.9	5.9
Part-time workers	1,515	1,483	1,521	9.1	9.0	8.7	9.2	8.6	8.7
Labor force time lost[2]	--	--	--	8.2	7.6	7.6	7.4	7.3	7.2
INDUSTRY									
Nonagricultural private wage and salary workers	6,350	5,571	5,650	7.2	6.7	6.6	6.5	6.2	6.3
Mining	135	94	101	13.6	14.0	12.4	9.3	11.1	12.9
Construction	802	725	753	13.0	12.2	11.6	12.5	11.9	12.1
Manufacturing	1,636	1,348	1,406	7.4	6.8	6.8	6.9	6.2	6.4
Durable goods	959	795	815	7.3	6.8	6.8	6.7	6.2	6.3
Nondurable goods	677	553	591	7.5	6.8	6.9	7.3	6.2	6.6
Transportation and public utilities	320	293	275	5.3	4.8	4.0	4.6	4.8	4.4
Wholesale and retail trade	1,801	1,627	1,596	7.9	7.5	7.2	7.3	7.0	6.9
Finance and service industries	1,656	1,483	1,519	5.5	5.2	5.4	4.9	4.7	4.8
Government workers	615	608	571	3.6	3.6	3.7	3.4	3.6	3.3
Agricultural wage and salary workers	270	158	161	15.3	11.6	11.2	10.7	9.0	8.7

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	May 1986	Apr. 1987	May 1987	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987	May 1987
DURATION									
Less than 5 weeks	3,494	2,844	3,255	3,610	3,416	3,361	3,383	3,143	3,349
5 to 14 weeks	2,255	2,020	1,798	2,671	2,530	2,477	2,447	2,232	2,118
15 weeks and over	2,410	2,442	2,265	2,232	2,200	2,131	2,050	2,075	2,101
15 to 26 weeks	1,172	1,297	1,105	1,065	1,022	1,008	945	1,025	1,003
27 weeks and over	1,237	1,145	1,160	1,167	1,178	1,123	1,105	1,049	1,098
Average (mean) duration, in weeks	15.4	16.0	15.5	14.8	15.0	14.6	14.9	14.9	14.9
Median duration, in weeks	6.9	8.3	6.6	6.8	7.0	6.6	6.6	7.0	6.5
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	42.8	38.9	44.5	42.4	41.9	42.2	42.9	42.2	44.3
5 to 14 weeks	27.6	27.6	24.6	31.4	31.1	31.1	31.1	30.0	28.0
15 weeks and over	29.5	33.4	31.0	26.2	27.0	26.7	26.0	27.9	27.8
15 to 26 weeks	14.4	17.8	15.1	12.5	12.5	12.7	12.0	13.8	13.2
27 weeks and over	15.2	15.7	15.9	13.7	14.5	14.1	14.0	14.1	14.5

Table A-8. Reason for unemployment

[Numbers in thousands]

Reason	Not seasonally adjusted			Seasonally adjusted					
	May 1986	Apr. 1987	May 1987	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987	May 1987
NUMBER OF UNEMPLOYED									
Job losers	3,983	3,788	3,412	4,214	3,971	3,839	3,822	3,732	3,611
On layoff	1,007	923	815	1,118	1,118	998	1,011	958	906
Other job losers	2,976	2,865	2,597	3,096	2,854	2,842	2,811	2,774	2,705
Job leavers	898	860	830	979	891	1,046	1,000	923	906
Reentrants	2,219	1,812	2,044	2,208	2,054	2,042	2,111	1,940	2,018
New entrants	1,058	846	1,033	1,046	1,084	1,048	956	911	1,018
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	48.8	51.8	46.6	49.9	49.6	48.2	48.4	49.7	47.8
On layoff	12.3	12.6	11.1	13.2	14.0	12.5	12.8	12.8	12.0
Other job losers	36.5	39.2	35.5	36.7	35.7	35.7	35.6	37.0	35.8
Job leavers	11.0	11.8	11.3	11.6	11.1	13.1	12.7	12.3	12.0
Reentrants	27.2	24.8	27.9	26.1	25.7	25.6	26.8	25.8	26.7
New entrants	13.0	11.6	14.1	12.4	13.6	13.1	12.1	12.1	13.5
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	3.4	3.2	2.9	3.4	3.3	3.2	3.2	3.1	3.0
Job leavers	.8	.7	.7	.8	.7	.9	.8	.8	.8
Reentrants	1.9	1.5	1.7	1.9	1.7	1.7	1.8	1.6	1.7
New entrants	.9	.7	.9	.9	.9	.9	.8	.8	.8

Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	May 1986	Apr. 1987	May 1987	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987	May 1987
Total, 16 years and over	8,422	7,500	7,546	7.2	6.7	6.7	6.6	6.3	6.3
16 to 24 years	3,242	2,901	2,912	13.8	13.1	13.1	12.9	12.6	12.6
16 to 19 years	1,504	1,376	1,430	18.8	17.7	18.0	18.1	17.4	17.7
16 to 17 years	686	625	734	20.8	20.1	20.3	20.0	19.2	21.4
18 to 19 years	816	756	696	17.4	16.2	16.6	16.5	16.3	15.0
20 to 24 years	1,738	1,525	1,482	11.2	10.7	10.5	10.2	10.1	9.8
25 years and over	5,161	4,588	4,621	5.5	5.2	5.1	5.1	4.8	4.8
25 to 54 years	4,634	4,079	4,102	5.9	5.6	5.5	5.4	5.0	5.0
55 years and over	556	512	548	3.7	3.2	3.0	3.4	3.4	3.7
Men, 16 years and over	4,653	4,186	4,254	7.1	6.8	6.7	6.6	6.3	6.4
16 to 24 years	1,778	1,583	1,604	14.5	13.4	13.6	13.2	13.2	13.4
16 to 19 years	833	777	818	20.0	18.5	18.6	19.3	19.2	20.0
16 to 17 years	369	366	407	21.3	21.4	21.2	20.2	21.5	23.2
18 to 19 years	464	411	412	19.1	16.9	17.0	18.6	17.5	17.7
20 to 24 years	945	806	786	11.7	10.7	11.1	10.1	10.1	10.0
25 years and over	2,855	2,597	2,636	5.4	5.4	5.1	5.1	4.8	4.9
25 to 54 years	2,544	2,276	2,299	5.7	5.7	5.6	5.4	5.0	5.1
55 years and over	344	330	363	3.9	3.5	3.3	3.6	3.7	4.1
Women, 16 years and over	3,769	3,314	3,292	7.2	6.7	6.7	6.6	6.2	6.1
16 to 24 years	1,464	1,319	1,308	13.1	12.7	12.4	12.5	12.0	11.7
16 to 19 years	671	599	612	17.5	16.8	17.4	16.7	15.6	15.4
16 to 17 years	317	257	327	20.3	18.7	19.2	19.7	16.7	19.6
18 to 19 years	352	345	284	15.5	15.3	16.1	14.2	15.1	12.4
20 to 24 years	793	720	696	10.8	10.6	9.8	10.3	10.1	9.7
25 years and over	2,306	1,991	1,985	5.6	5.1	5.1	5.0	4.7	4.7
25 to 54 years	2,098	1,803	1,803	6.0	5.5	5.4	5.4	5.0	4.9
55 years and over	212	183	185	3.5	2.7	2.6	3.2	3.0	3.0

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	May 1986	Apr. 1987	May 1987	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987	May 1987
Civilian noninstitutional population	25,075	25,667	25,723	25,075	25,515	25,567	25,618	25,667	25,723
Civilian labor force	15,997	16,179	16,424	16,043	16,384	16,407	16,455	16,394	16,464
Participation rate	63.8	63.0	63.9	64.0	64.2	64.2	64.2	63.9	64.0
Employed	13,899	14,296	14,469	13,883	14,316	14,306	14,391	14,468	14,454
Employment-population ratio[2]	55.4	55.7	56.2	55.4	56.1	56.0	56.2	56.4	56.2
Unemployed	2,098	1,883	1,955	2,160	2,068	2,101	2,064	1,925	2,011
Unemployment rate	13.1	11.6	11.9	13.5	12.6	12.8	12.5	11.7	12.2
Not in labor force	9,078	9,488	9,298	9,032	9,131	9,160	9,163	9,273	9,259

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	May 1986	May 1987	May 1986	May 1987	May 1986	May 1987
Total, 16 years and over[1]	109,041	112,377	8,158	7,318	7.0	6.1
Managerial and professional specialty	26,478	27,536	603	627	2.2	2.2
Executive, administrative, and managerial	12,556	13,117	317	362	2.5	2.7
Professional specialty	13,922	14,418	286	265	2.0	1.8
Technical, sales, and administrative support	33,735	34,868	1,699	1,539	4.8	4.2
Technicians and related support	3,164	3,234	81	109	2.5	3.3
Sales occupations	13,134	13,463	706	729	5.1	5.1
Administrative support, including clerical	17,437	18,171	912	700	5.0	3.7
Service occupations	14,512	15,125	1,378	1,197	8.7	7.3
Private household	974	899	59	52	5.7	5.5
Protective service	1,780	1,887	90	104	4.8	5.2
Service, except private household and protective	11,758	12,339	1,228	1,041	9.5	7.8
Precision production, craft, and repair	13,259	13,456	1,038	881	7.3	6.1
Mechanics and repairers	4,366	4,341	214	198	4.7	4.4
Construction trades	4,860	4,990	494	453	9.2	8.3
Other precision production, craft, and repair	4,033	4,125	330	230	7.6	5.3
Operators, fabricators, and laborers	17,361	17,381	2,026	1,806	10.4	9.4
Machine operators, assemblers, and inspectors	8,028	7,943	899	820	10.1	9.4
Transportation and material moving occupations	4,656	4,714	402	315	7.9	6.3
Handlers, equipment cleaners, helpers, and laborers	4,679	4,724	725	671	13.4	12.4
Construction laborers	786	810	187	178	19.2	18.0
Other handlers, equipment cleaners, helpers, and laborers	3,893	3,914	537	493	12.1	11.2
Farming, forestry, and fishing	3,695	4,012	290	185	7.3	4.4

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	May 1986	May 1987	May 1986	May 1987	May 1986	May 1987	May 1986	May 1987	May 1986	May 1987
VIETNAM-ERA VETERANS										
Total, 30 years and over	7,733	7,836	7,164	7,250	6,831	6,937	333	313	4.6	4.3
30 to 44 years	6,403	6,260	6,094	5,974	5,795	5,723	299	251	4.9	4.2
30 to 34 years	1,173	956	1,094	912	1,008	841	86	71	7.9	7.8
35 to 39 years	3,125	2,663	2,978	2,538	2,837	2,433	141	105	4.7	4.1
40 to 44 years	2,105	2,641	2,022	2,524	1,950	2,449	72	75	3.6	3.0
45 years and over	1,330	1,576	1,070	1,276	1,036	1,214	34	62	3.2	4.9
NONVETERANS										
Total, 30 to 44 years	18,264	19,321	17,255	18,244	16,357	17,405	898	839	5.2	4.6
30 to 34 years	8,464	8,812	8,062	8,403	7,621	8,009	441	394	5.5	4.7
35 to 39 years	5,610	6,137	5,305	5,787	5,052	5,526	253	261	4.8	4.5
40 to 44 years	4,190	4,372	3,888	4,054	3,684	3,870	204	184	5.2	4.5

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 30 to 44 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population.

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	May 1986	Apr. 1987	May 1987	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987	May 1987
California									
Civilian noninstitutional population	20,059	20,477	20,516	20,059	20,364	20,401	20,440	20,477	20,516
Civilian labor force	13,188	13,690	13,807	13,294	13,403	13,626	13,655	13,761	13,917
Employed	12,381	12,900	13,040	12,408	12,568	12,779	12,833	12,959	13,070
Unemployed	807	790	767	886	835	847	822	802	847
Unemployment rate	6.1	5.8	5.6	6.7	6.2	6.2	6.0	5.8	6.1
Florida									
Civilian noninstitutional population	9,140	9,376	9,398	9,140	9,312	9,333	9,355	9,376	9,398
Civilian labor force	5,562	5,768	5,879	5,567	5,729	5,775	5,853	5,837	5,881
Employed	5,268	5,469	5,581	5,251	5,396	5,446	5,524	5,515	5,562
Unemployed	294	299	297	316	333	329	329	322	319
Unemployment rate	5.3	5.2	5.1	5.7	5.8	5.7	5.6	5.5	5.4
Illinois									
Civilian noninstitutional population	8,656	8,680	8,682	8,656	8,674	8,676	8,678	8,680	8,682
Civilian labor force	5,695	5,612	5,687	5,688	5,620	5,633	5,620	5,652	5,680
Employed	5,228	5,150	5,221	5,206	5,205	5,199	5,186	5,186	5,201
Unemployed	468	462	466	482	415	434	434	466	479
Unemployment rate	8.2	8.2	8.2	8.5	7.4	7.7	7.7	8.2	8.4
Massachusetts									
Civilian noninstitutional population	4,551	4,568	4,570	4,551	4,563	4,565	4,567	4,568	4,570
Civilian labor force	3,027	3,046	3,053	3,045	3,052	3,040	3,074	3,070	3,069
Employed	2,906	2,928	2,950	2,911	2,946	2,935	2,953	2,947	2,954
Unemployed	121	118	103	134	106	105	121	123	115
Unemployment rate	4.0	3.9	3.4	4.4	3.5	3.5	3.9	4.0	3.7
Michigan									
Civilian noninstitutional population	6,853	6,914	6,920	6,853	6,897	6,903	6,909	6,914	6,920
Civilian labor force	4,409	4,450	4,518	4,375	4,496	4,474	4,500	4,466	4,486
Employed	3,993	4,072	4,150	3,962	4,163	4,092	4,138	4,081	4,124
Unemployed	417	379	368	413	333	382	362	385	362
Unemployment rate	9.4	8.5	8.2	9.4	7.4	8.5	8.0	8.6	8.1
New Jersey									
Civilian noninstitutional population	5,916	5,971	5,977	5,916	5,956	5,961	5,966	5,971	5,977
Civilian labor force	3,918	3,934	4,029	3,891	3,857	3,908	3,965	3,946	4,003
Employed	3,712	3,785	3,862	3,685	3,718	3,746	3,819	3,791	3,836
Unemployed	206	149	167	206	139	162	146	155	167
Unemployment rate	5.3	3.8	4.2	5.3	3.6	4.1	3.7	3.9	4.2
New York									
Civilian noninstitutional population	13,728	13,769	13,774	13,728	13,759	13,762	13, 66	13,769	13,774
Civilian labor force	8,259	8,337	8,318	8,429	8,511	8,484	8,511	8,473	8,491
Employed	7,690	7,934	7,937	7,830	8,009	8,065	8,108	8,062	8,082
Unemployed	568	403	381	599	502	419	403	411	409
Unemployment rate	6.9	4.8	4.6	7.1	5.9	4.9	4.7	4.9	4.8
North Carolina									
Civilian noninstitutional population	4,747	4,822	4,829	4,747	4,802	4,809	4,816	4,822	4,829
Civilian labor force	3,156	3,226	3,250	3,146	3,271	3,290	3,264	3,267	3,240
Employed	2,984	3,086	3,114	2,968	3,115	3,122	3,107	3,112	3,101
Unemployed	172	140	136	178	156	168	157	155	139
Unemployment rate	5.4	4.3	4.2	5.7	4.8	5.1	4.8	4.7	4.3
Ohio									
Civilian noninstitutional population	8,103	8,128	8,131	8,103	8,122	8,124	8,127	8,128	8,131
Civilian labor force	5,187	5,204	5,264	5,214	5,287	5,303	5,215	5,223	5,294
Employed	4,798	4,837	4,892	4,784	4,850	4,848	4,824	4,846	4,878
Unemployed	389	367	372	430	437	455	391	377	416
Unemployment rate	7.5	7.1	7.1	8.2	8.3	8.6	7.5	7.2	7.9
Pennsylvania									
Civilian noninstitutional population	9,235	9,272	9,276	9,235	9,262	9,266	9,269	9,272	9,276
Civilian labor force	5,667	5,459	5,589	5,702	5,610	5,561	5,530	5,545	5,621
Employed	5,231	5,164	5,289	5,261	5,267	5,255	5,204	5,238	5,319
Unemployed	436	295	300	441	343	306	326	307	302
Unemployment rate	7.7	5.4	5.4	7.7	6.1	5.5	5.9	5.5	5.4
Texas									
Civilian noninstitutional population	11,961	12,172	12,192	11,961	12,115	12,134	12,154	12,172	12,192
Civilian labor force	8,076	8,208	8,458	8,128	8,293	8,315	8,134	8,267	8,511
Employed	7,321	7,528	7,731	7,367	7,497	7,592	7,494	7,552	7,778
Unemployed	754	680	728	761	796	723	640	715	733
Unemployment rate	9.3	8.3	8.6	9.4	9.6	8.7	7.9	8.6	8.6

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	May 1986	Mar. 1987	Apr. 1987 p	May 1987 p	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987 p	May 1987 p
Total	99,815	100,462	101,390	102,164	99,389	100,919	101,150	101,329	101,609	101,732
Total private	82,834	83,152	84,038	84,797	82,730	83,983	84,215	84,352	84,570	84,696
Goods-producing	24,712	24,214	24,487	24,755	24,708	24,708	24,743	24,749	24,757	24,747
Mining	781	718	723	731	786	718	719	722	730	735
Oil and gas extraction	448.4	408.5	409.2	411.7	457	405	406	408	416	420
Construction	4,950	4,599	4,840	5,041	4,910	5,036	5,038	5,032	5,016	4,996
General building contractors	1,302.4	1,196.4	1,223.0	1,259.6	1,302	1,311	1,309	1,291	1,271	1,258
Manufacturing	18,981	18,897	18,924	18,983	19,012	18,956	18,986	18,995	19,011	19,016
Production workers	12,885	12,846	12,876	12,937	12,903	12,884	12,916	12,925	12,941	12,955
Durable goods	11,286	11,145	11,152	11,182	11,277	11,157	11,179	11,176	11,174	11,174
Production workers	7,472	7,382	7,394	7,428	7,454	7,370	7,398	7,399	7,402	7,412
Lumber and wood products	705.3	713.5	722.4	739.5	706	731	733	734	736	740
Furniture and fixtures	493.6	503.2	504.7	506.3	496	500	501	[illegible]	504	509
Stone, clay, and glass products	593.7	569.9	582.0	590.6	589	586	588	585	587	586
Primary metal industries	770.8	742.2	748.3	745.0	765	726	733	739	744	739
Blast furnaces and basic steel products	284.5	267.0	273.8	272.8	282	254	261	266	272	270
Fabricated metal products	1,437.8	1,414.5	1,417.7	1,422.8	1,438	1,422	1,419	1,419	1,422	1,423
Machinery, except electrical	2,076.0	2,025.1	2,025.6	2,026.7	2,074	2,007	2,018	2,015	2,024	2,025
Electrical and electronic equipment	2,122.0	2,092.6	2,086.5	2,080.9	2,126	2,111	2,106	2,099	2,093	2,085
Transportation equipment	2,013.4	2,025.8	2,008.2	2,011.6	2,009	2,014	2,022	2,022	2,006	2,008
Motor vehicles and equipment	868.4	857.2	841.1	842.0	863	851	859	854	841	839
Instruments and related products	709.2	694.3	693.1	693.1	710	697	695	694	694	694
Miscellaneous manufacturing	363.9	363.8	363.3	365.0	364	363	364	368	364	365
Nondurable goods	7,695	7,752	7,772	7,801	7,735	7,799	7,807	7,819	7,837	7,842
Production workers	5,413	5,464	5,482	5,509	5,449	5,514	5,518	5,526	5,539	5,543
Food and kindred products	1,575.3	1,576.2	1,579.0	1,596.1	1,615	1,628	1,630	1,635	1,641	1,635
Tobacco manufactures	55.7	55.5	53.2	53.5	60	58	58	57	56	57
Textile mill products	702.1	722.1	724.4	726.4	702	718	722	725	724	726
Apparel and other textile products	1,109.0	1,105.2	1,109.7	1,112.5	1,105	1,106	1,101	1,103	1,106	1,109
Paper and allied products	671.2	675.0	673.3	674.2	673	678	679	678	677	676
Printing and publishing	1,450.1	1,486.5	1,493.2	1,493.5	1,451	1,479	1,483	1,485	1,492	1,495
Chemicals and allied products	1,018.9	1,015.5	1,016.0	1,019.5	1,020	1,018	1,018	1,017	1,018	1,022
Petroleum and coal products	172.0	162.0	163.4	165.8	171	164	164	164	164	164
Rubber and miscellaneous plastics products	788.2	807.6	811.5	810.4	786	803	805	807	810	809
Leather and leather products	152.3	146.4	148.2	149.0	152	147	147	148	149	149
Service-producing	75,103	76,248	76,903	77,409	74,681	76,211	76,407	76,580	76,852	76,985
Transportation and public utilities	5,252	5,275	5,311	5,349	5,247	5,304	5,315	5,333	5,345	5,344
Transportation	3,033	3,065	3,098	3,131	3,024	3,089	3,097	3,112	3,123	3,122
Communication and public utilities	2,219	2,210	2,213	2,218	2,223	2,215	2,218	2,221	2,222	2,222
Wholesale trade	5,742	5,725	5,749	5,776	5,749	5,741	5,757	5,766	5,773	5,783
Durable goods	3,389	3,380	3,390	3,407	3,389	3,386	3,391	3,397	3,397	3,407
Nondurable goods	2,353	2,345	2,359	2,369	2,360	2,355	2,366	2,369	2,376	2,376
Retail trade	17,799	17,737	18,009	18,223	17,798	18,080	18,140	18,136	18,209	18,223
General merchandise stores	2,286.7	2,278.5	2,296.4	2,315.2	2,359	2,358	2,373	2,380	2,385	2,387
Food stores	2,846.4	2,906.0	2,921.5	2,941.5	2,862	2,929	2,940	2,944	2,954	2,956
Automotive dealers and service stations	1,939.7	1,958.8	1,972.8	1,988.2	1,935	1,978	1,979	1,979	1,981	1,982
Eating and drinking places	5,971.2	5,789.3	5,959.7	6,088.7	5,859	5,946	5,956	5,964	5,966	5,975
Finance, insurance, and real estate	6,257	6,478	6,532	6,576	6,257	6,480	6,501	6,526	6,560	6,577
Finance	3,125	3,246	3,262	3,272	3,131	3,235	3,243	3,256	3,275	3,279
Insurance	1,928	2,020	2,028	2,034	1,929	2,012	2,016	2,022	2,032	2,036
Real estate	1,204	1,212	1,242	1,270	1,197	1,233	1,242	1,248	1,253	1,262
Services	23,072	23,723	23,950	24,118	22,971	23,670	23,759	23,842	23,926	24,022
Business services	4,729.7	4,963.9	4,998.9	5,054.4	4,744	4,950	4,984	5,020	5,044	5,070
Health services	6,500.2	6,762.1	6,786.2	6,814.4	6,510	6,721	6,748	6,773	6,800	6,821
Government	16,981	17,310	17,352	17,367	16,659	16,936	16,935	16,977	17,039	17,036
Federal	2,911	2,916	2,926	2,933	2,899	2,912	2,916	2,922	2,929	2,921
State	3,938	4,036	4,047	4,014	3,883	3,929	3,927	3,930	3,944	3,959
Local	10,132	10,358	10,379	10,420	9,877	10,095	10,092	10,125	10,166	10,156

p = preliminary

NOTE: Data have been revised to reflect March 1986 benchmarks and updated seasonal adjustment factors.

Table B-2. Average weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	May 1986	Mar. 1987	Apr. 1987 p	May 1987 p	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987 p	May 1987 p
Total private	34.7	34.6	34.6	34.8	34.8	34.7	34.9	34.8	34.7	34.8
Mining	41.8	41.8	41.7	42.2	(2)	(2)	(2)	(2)	(2)	(2)
Construction	37.9	37.4	37.4	38.7	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.6	40.9	40.4	40.9	40.7	40.9	41.1	40.9	40.6	41.0
Overtime hours	3.3	3.6	3.3	3.6	3.5	3.6	3.6	3.6	3.5	3.8
Durable goods	41.2	41.6	41.0	41.5	41.3	41.6	41.7	41.5	41.2	41.5
Overtime hours	3.3	3.7	3.4	3.7	3.5	3.7	3.7	3.7	3.6	3.9
Lumber and wood products	40.7	40.7	40.6	41.6	40.4	40.8	41.3	40.9	40.6	41.3
Furniture and fixtures	39.2	39.8	38.8	39.2	39.6	40.2	40.2	40.0	39.1	39.6
Stone, clay, and glass products	42.6	42.0	42.0	42.7	42.1	42.5	42.8	42.5	41.8	42.2
Primary metal industries	41.7	42.8	42.6	42.9	41.7	42.6	42.6	42.6	42.4	43.0
Blast furnaces and basic steel products	41.7	42.6	43.3	43.5	41.€	42.7	42.3	42.3	42.8	43.4
Fabricated metal products	41.0	41.5	40.9	41.4	41.1	41.6	41.6	41.5	41.2	41.6
Machinery, except electrical	41.5	42.2	41.5	42.2	41.7	42.0	42.2	42.0	4'.7	42.4
Electrical and electronic equipment	40.8	40.9	40.2	40.3	41.0	41.0	41.1	40.9	40.5	40.5
Transportation equipment	42.1	42.6	41.9	42.1	42.1	42.3	42.5	42.3	41.9	42.1
Motor vehicles and equipment	42.0	43.2	42.3	42.3	41.9	42.9	43.0	42.9	42.1	42.2
Instruments and related products	40.6	41.5	40.9	41.0	40.9	41.2	41.3	41.3	41.1	41.3
Miscellaneous manufacturing	39.4	39.3	38.8	39.1	(2)	(2)	(2)	(2)	(2)	(2)
Nondurable goods	39.8	40.0	39.5	40.1	39.9	40.1	40.3	40.1	39.8	40.2
Overtime hours	3.2	3.4	3.1	3.5	3.4	3.5	3.5	3.5	3.3	3.7
Food and kindred products	40.1	39.5	39.3	40.0	40.1	40.0	40.1	40.0	39.8	40.0
Tobacco manufactures	37.2	38.1	37.1	38.8	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	40.9	42.0	40.9	41.6	41.0	41.6	42.0	42.1	41.4	41.7
Apparel and other textile products	36.6	37.0	35.9	37.0	36.6	37.0	37.4	37.0	36.2	37.0
Paper and allied products	43.0	42.9	42.9	43.4	43.2	43.4	43.3	43.0	43.1	43.6
Printing and publishing	37.8	38.0	37.7	37.9	38.0	37.9	38.1	37.9	37.8	38.1
Chemicals and allied products	41.9	42.1	42.2	42.0	41.9	42.2	42.2	42.0	42.2	42.0
Petroleum and coal products	43.4	43.9	43.6	44.1	43.7	44.6	44.0	44.1	43.7	44.5
Rubber and miscellaneous plastics products	41.1	41.5	40.9	41.5	(2)	(2)	(2)	(2)	(2)	(2)
Leather and leather products	36.8	37.5	36.6	38.0	(2)	(2)	(2)	(2)	(2)	(2)
Transportation and public utilities	39.0	38.9	38.8	39.0	39.2	39.0	39.2	39.0	39.0	39.2
Wholesale trade	38.4	37.9	38.1	38.2	38.4	38.3	38.3	38.1	38.2	38.2
Retail trade	29.1	28.9	29.2	29.3	29.2	29.0	29.3	29.3	29.5	29.4
Finance, insurance, and real estate	36.2	36.3	36.3	36.3	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.5	32.4	32.3	32.3	32.6	32.4	32.6	32.5	32.4	32.4

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[1] Data relate to production workers in mining and manufacturing; to construction workers in construction; and to nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

[2] This series is not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

NOTE: Data have been revised to reflect March 1986 benchmarks and updated seasonal adjustment factors.

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	May 1986	Mar. 1987	Apr. 1987 p	May 1987 p	May 1986	Mar. 1987	Apr. 1987 p	May 1987 p
Total private	$8.73	$8.92	$8.90	$8.92	$302.93	$308.63	$307.94	$311.42
Seasonally adjusted	8.74	8.91	8.91	8.95	304.15	310.07	309.18	311.46
Mining	12.42	12.51	12.41	12.39	519.16	522.92	517.50	522.86
Construction	12.37	12.59	12.55	12.61	468.82	470.87	469.37	488.31
Manufacturing	9.72	9.85	9.87	9.86	394.63	402.87	398.75	403.27
Durable goods	10.28	10.39	10.39	10.39	423.54	432.22	425.99	431.19
Lumber and wood products	8.35	8.28	8.35	8.42	339.85	337.30	339.01	350.27
Furniture and fixtures	7.39	7.58	7.57	7.63	289.69	301.68	293.72	299.10
Stone, clay, and glass products	10.03	10.13	10.24	10.25	427.28	425.46	430.08	437.68
Primary metal industries	11.98	11.82	11.98	11.92	499.57	505.90	510.35	511.37
Blast furnaces and basic steel products	13.85	13.66	13.83	13.76	577.55	581.92	598.84	599.56
Fabricated metal products	9.87	9.99	9.98	9.97	404.67	414.59	409.18	412.76
Machinery, except electrical	10.58	10.72	10.70	10.70	439.07	452.38	444.05	451.54
Electrical and electronic equipment	9.63	9.84	9.85	9.84	392.90	402.46	395.97	396.55
Transportation equipment	12.73	12.86	12.76	12.82	535.93	547.84	535.49	539.72
Motor vehicles and equipment	13.39	13.49	13.37	13.39	562.38	582.77	565.55	566.40
Instruments and related products	9.40	9.67	9.66	9.70	381.64	401.31	395.09	397.70
Miscellaneous manufacturing	7.52	7.66	7.67	7.73	296.29	301.04	297.60	302.24
Nondurable goods	8.92	9.09	9.14	9.13	355.02	363.60	361.03	366.11
Food and kindred products	8.78	8.93	8.95	8.94	352.08	352.74	351.74	357.60
Tobacco manufactures	13.49	13.80	14.28	14.61	501.83	525.78	529.79	366.87
Textile mill products	6.87	7.12	7.13	7.13	280.98	299.04	291.62	296.61
Apparel and other textile products	5.81	5.93	5.94	5.87	212.65	219.41	213.25	217.19
Paper and allied products	11.15	11.27	11.36	11.41	479.45	483.48	487.34	495.19
Printing and publishing	9.94	10.17	10.16	10.20	375.73	386.46	383.03	386.58
Chemicals and allied products	11.90	12.24	12.28	12.31	498.61	515.30	518.22	517.02
Petroleum and coal products	14.00	14.50	14.49	14.55	607.60	636.55	631.76	641.66
Rubber and miscellaneous plastics products	8.71	8.80	8.82	8.81	357.98	365.20	360.74	365.62
Leather and leather products	5.90	6.06	6.14	6.04	217.12	227.25	224.72	229.52
Transportation and public utilities	11.58	11.90	11.90	11.91	451.62	462.91	461.72	464.49
Wholesale trade	9.30	9.53	9.53	9.57	357.12	361.19	363.09	365.57
Retail trade	6.01	6.08	6.09	6.09	174.89	175.71	177.83	178.44
Finance, insurance, and real estate	8.31	8.72	8.67	8.65	300.82	316.54	314.72	314.00
Services	8.10	8.41	8.39	8.38	263.25	272.48	271.00	270.67

[1] See footnote 1, table B-2.
p = preliminary.

NOTE: Data have been revised to reflect March 1986 benchmarks and updated seasonal adjustment factors.

Table B-4. Hourly Earnings Index for production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted					Seasonally adjusted						
	May 1986	Mar. 1987	Apr. 1987p	May 1987p	Percent change from: May 1986-May 1987	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987p	May 1987p	Percent change from: Apr. 1987-May 1987
Total private nonfarm:												
Current dollars	168.8	172.3	172.6	172.5	2.2	168.9	171.2	171.8	172.2	172.5	172.5	(2)
Constant (1977) dollars	95.7	94.6	94.3	N.A.	(3)	95.3	94.7	94.6	94.4	94.2	N.A.	(4)
Mining	181.0	181.4	181.0	181.2	.1	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Construction	151.3	153.0	153.0	154.0	1.8	151.6	152.8	152.4	153.8	153.7	154.2	.3
Manufacturing	172.3	174.6	175.4	174.3	1.1	172.3	173.4	173.7	174.3	175.1	174.2	-.5
Transportation and public utilities	169.5	174.4	174.3	174.7	3.1	170.5	173.6	174.3	174.6	174.7	175.7	.6
Wholesale trade	171.7	175.8	175.8	176.5	2.8	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Retail trade	158.1	159.4	160.1	160.5	1.5	157.6	158.9	158.9	159.0	159.7	160.1	.2
Finance, insurance, and real estate	178.9	187.0	186.2	185.9	3.9	(5)	(5)	(5)	(5)	(5)	(5)	(5)
Services	173.2	179.3	179.3	179.3	3.5	173.6	177.5	178.4	179.0	179.3	179.7	.2

[1] See footnote 1, table B-2.
[2] Percent change is less than .05 percent.
[3] Percent change is -1.3 percent from April 1986 to April 1987, the latest month available.
[4] Percent change is -0.3 percent from March 1987 to April 1987, the latest month available.
[5] These series are not seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.
N.A. Data not available.
p = preliminary.

NOTE: Data have been revised to reflect March 1986 benchmarks and updated seasonal adjustment factors.

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers[1] on private nonagricultural payrolls by industry

(1977 = 100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	May 1986	Mar. 1987	Apr. 1987 p	May 1987 p	May 1986	Jan. 1987	Feb. 1987	Mar. 1987	Apr. 1987 p	May 1987 p
Total	117.1	116.9	118.2	120.1	117.2	118.7	119.7	119.6	119.6	120.1
Goods-producing	98.1	95.9	96.3	99.4	97.9	98.8	99.3	98.9	98.0	99.1
Mining	84.6	78.8	79.4	81.4	85.7	78.9	79.9	80.0	81.1	82.5
Construction	133.9	119.4	127.0	137.8	131.0	136.2	136.2	135.5	132.7	134.9
Manufacturing	91.8	92.2	91.2	92.7	92.0	92.5	93.1	92.8	92.1	93.0
Durable goods	90.4	90.2	89.1	90.4	90.3	90.0	90.6	90.2	89.5	90.4
Lumber and wood products	98.3	98.7	99.8	104.9	97.7	101.5	103.3	102.5	102.0	104.3
Furniture and fixtures	103.7	107.8	105.4	106.4	105.5	107.9	107.9	107.9	106.0	108.4
Stone, clay, and glass products	88.7	83.7	86.0	89.0	86.7	87.3	88.3	87.5	86.1	86.9
Primary metal industries	64.1	62.6	63.0	63.1	63.4	60.4	61.2	61.9	62.1	62.6
Blast furnaces and basic steel products	52.2	48.6	51.1	50.8	50.8	46.1	46.8	47.7	50.3	51.3
Fabricated metal products	88.8	88.6	87.4	88.9	88.9	89.1	89.1	88.9	88.4	89.2
Machinery, except electrical	87.1	85.8	84.7	86.4	87.3	84.2	85.1	84.7	84.6	86.5
Electrical and electronic equipment	100.5	99.9	97.9	98.4	101.1	100.8	100.8	99.9	98.8	98.9
Transportation equipment	97.1	99.6	96.6	97.1	96.5	97.5	98.9	98.2	96.2	96.5
Motor vehicles and equipment	87.1	89.2	85.3	85.2	86.0	87.5	89.0	88.0	84.7	84.4
Instruments and related products	102.3	102.6	100.8	101.4	102.9	101.8	102.0	101.7	101.3	102.0
Miscellaneous manufacturing	79.9	80.1	79.4	79.9	80.2	81.0	81.1	81.1	79.9	80.2
Nondurable goods	93.8	95.2	94.3	96.2	94.6	96.3	96.7	96.5	95.9	97.0
Food and kindred products	94.5	93.6	93.2	96.3	97.9	98.8	99.3	99.4	99.4	99.6
Tobacco manufactures	70.5	73.5	67.7	70.6	77.6	76.3	76.0	77.7	76.3	77.3
Textile mill products	77.6	82.3	80.5	82.1	77.8	81.2	82.3	82.9	81.4	82.3
Apparel and other textile products	85.0	85.6	83.4	86.2	84.6	85.8	86.1	85.3	83.9	85.7
Paper and allied products	98.6	99.1	98.7	100.2	99.4	100.6	100.6	99.7	99.7	100.7
Printing and publishing	126.8	129.8	129.5	130.5	127.2	129.5	130.2	129.4	129.2	130.8
Chemicals and allied products	92.1	93.3	93.3	93.5	92.2	93.2	93.4	93.1	93.4	93.6
Petroleum and coal products	83.2	81.3	82.6	85.0	83.4	84.3	83.1	83.3	83.4	84.9
Rubber and miscellaneous plastics products	110.0	113.8	112.7	114.2	109.8	112.9	113.5	113.5	112.8	114.5
Leather and leather products	57.1	56.6	56.3	58.7	56.9	57.4	57.8	57.8	56.8	58.1
Service-producing	127.6	128.5	130.3	131.6	127.9	129.8	131.0	131.0	131.5	131.7
Transportation and public utilities	105.7	106.2	106.5	107.9	106.2	107.0	107.8	107.7	107.9	108.4
Wholesale trade	117.5	115.4	116.3	117.4	117.7	117.1	117.4	116.9	117.4	117.5
Retail trade	117.3	115.7	119.1	120.8	117.8	118.9	120.4	120.3	121.6	121.2
Finance, insurance, and real estate	135.2	139.9	141.0	142.2	135.6	140.4	141.0	141.5	142.0	142.8
Services	145.6	148.6	150.1	151.2	145.5	148.6	150.1	150.2	150.1	150.7

[1] See footnote 1, table B-2.
p = preliminary.

NOTE: Data have been revised to reflect March 1986 benchmarks and updated seasonal adjustment factors.

Table B-6. Indexes of diffusion: Percent of industries in which employment[1] increased

Time span	Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Over 1-month span	1985	55.9	47.0	52.4	47.3	53.2	46.8	53.8	53.8	47.8	53.2	54.3	57.3
	1986	53.2	48.1	48.1	53.5	52.4	46.8	52.4	56.2	55.1	53.2	59.7	59.7
	1987	53.5	56.8	58.6	59.7p	55.9p							
Over 3-month span	1985	51.1	48.4	42.4	46.5	44.3	49.7	47.0	48.6	45.9	47.6	55.1	56.5
	1986	49.7	44.9	45.7	48.4	47.6	45.4	48.4	55.1	55.9	58.1	58.6	60.3
	1987	58.6	59.5	61.9p	65.7p								
Over 6-month span	1985	46.5	46.5	43.2	44.3	44.3	45.1	43.0	44.3	49.2	49.2	47.3	45.9
	1986	47.6	47.6	43.0	43.2	45.4	48.4	47.3	53.0	59.2	58.9	57.8	58.9
	1987	61.6p	63.8p										
Over 12-month span	1985	44.6	44.1	43.8	40.8	41.6	41.6	42.2	42.4	43.8	44.3	44.1	42.4
	1986	43.8	44.1	46.2	45.7	47.8	49.5	49.5	51.6	54.9	51.9p	57.8p	
	1987												

[1] Number of employees, seasonally adjusted for 1, 3, and 6 month spans, on payrolls of 185 private nonagricultural industries. Data for the 12-month span are unadjusted.
p = preliminary.

NOTE: Figures are the percent of industries with employment rising. (Half of the unchanged components are counted as rising.) Data are centered within the spans. Data have been revised to reflect March 1986 benchmarks and updated seasonal adjustment factors.

Senator PROXMIRE. Thank you Mrs. Norwood.

Mrs. Norwood, as I indicated, both the labor force and employment grew more than 600,000 in May after seasonal adjustment. Before seasonal adjustment total employment rose more than 1.2 million in May. All the other economic signs suggest the economy has been flat. How can a flat economy create more jobs and how can a flat economy sustain this kind of an increase that we had in April and that was carried over into May?

Mrs. NORWOOD. We always create this number of jobs, somewhere between 2 and 4 million jobs, between April and July, because in the summer as the weather improves and schools close, there are a lot of people who are looking for work and most of them are successful in finding jobs.

Senator PROXMIRE. Let me interrupt. I am trying to get behind that. All these data are seasonally adjusted, right?

Mrs. NORWOOD. Yes, but this May the increase was more than seasonally adjusted.

Senator PROXMIRE. If you make an adjustment for the normal increase you would have in May, and yet we have a big drop in April, the indications are that that was sustained in May, carried through in May, but at the same time we seem to have a flat economy on every other measurement.

Mrs. NORWOOD. Yes, that's correct.

Senator PROXMIRE. I know that unemployment is a lagging indicator.

Mrs. NORWOOD. Unemployment, of course, was flat this month. Moreover the establishment survey shows a relatively small employment increase. Clearly construction has not been doing well, and that, as you indicate, certainly fits together with the data in the housing area. I think that even though the economy is not growing very rapidly, it is still growing, and we would still expect to have an increase in jobs in the summer months. However as I've indicated in my prepared statement, I believe that the size of the May employment and labor force increases are probably exaggerated.

Senator PROXMIRE. The economy is growing, but the economy is growing at a rate which on the basis of past experience is not enough to diminish unemployment. In fact, at a rate of about 2.5 percent or so, or less—the last figure we had was 1.4 percent or something like that—that normally results in an increase in unemployment, particularly if productivity is increasing, and there has been some increase in productivity.

Mrs. NORWOOD. Yes. Much of the research has suggested a 3 percent growth rate for the economy is necessary to keep the unemployment rate from increasing. That research was based on conditions that were quite different from now. The labor force increase has slowed down and we project for the future that it will continue to be slower than it has been in the past. That means that you don't need to create quite as many jobs as you did before. If you look at the current recovery period compared to the recovery period of the 1970's, there is clearly a much smaller labor force increase as well as a somewhat smaller employment increase.

Senator PROXMIRE. Average weekly hours and overtime hours in manufacturing rose significantly in May. That is another indication of economic activity and it is particularly noteworthy in view of the fact that we had a relatively flat economy. Was that just a reversal of the April decline that you attributed to the fact that Good Friday and Passover both occurred in the April survey week, or is it a sign of strengthening in manufacturing?

Mrs. NORWOOD. As we said last month, we thought the drop in hours last month was holiday related. I think this month's figure proves that to be the case. Therefore, there is no real increase in hours. The one thing that is different is that overtime hours are rather high. But, of course, employment in manufacturing is really very flat.

Senator PROXMIRE. I notice in your diffusion index you have another contrary indicator here. In February the percentage of industries in which employment increased was 56.8 percent; that increased in March to 58.6 percent; it increased in April to 59.7 percent; and then last month it dropped to 55.9 percent and wiped out all of the gains over the past 4 months.

Mrs. NORWOOD. That is correct, but it is still a fairly high number.

Senator PROXMIRE. It's still a high number, but it dropped below February, below March, and below April, and quite a significant drop.

Let me ask you about something else. I am certain you are aware that Irvin Kelner, the chief economist at Manufacturers Hanover, has developed what he calls the nuisance index. That index follows the prices of frequently purchased goods and services, such as toothpaste, ground coffee, haircuts, dry cleaning of a suit, and a 2-mile taxi ride. Because these items are bought all the time, the changes in their prices may heavily influence consumers' perception of the rate of inflation. The nuisance index rose an average of 15 percent a year in 1985 and 1986, or four times faster than the official Consumer Price Index.

Since we can postpone buying a new car but must have our morning cup of coffee, does the nuisance index better reflect the short-term perception of inflation than does the standard CPI and does the BLS have anything similar to the nuisance index?

Mrs. NORWOOD. No, we don't have any nuisance index. I would be very disturbed, Senator, if we tried to look at inflation without taking account of the price of basic food and shoes and clothing and transportation, subway transportation and buses, the kinds of things that people of this country really have to buy.

Senator PROXMIRE. Nobody is asking that. I am just saying could you have something of this kind that would supplement it to a modest extent? You are absolutely right. What we are concerned about are the fundamental increases in the cost of living that go to the necessities. At the same time I think that is an interesting perception. Politically it is a good perception, at least.

Mrs. NORWOOD. It certainly is an interesting concept. I think there would be a great deal of disagreement on what should be included in it. BLS issues a number of indexes with specific exclusions and there are people who redefine inflation by looking at what they call an underlying rate, which excludes food, housing, and cars, for example. There are lots of different approaches to this.

Senator PROXMIRE. There is another statistic that indicates that the workers in this country are being left out, that people who work are not getting their share; the people who own stock, the people who benefit from higher profits are doing well. A headline in yesterday's New Times proclaimed "As Output Gains Wages Lag." According to the article real hourly compensation of American manufacturing workers rose an average of only eight-tenths of 1 percent annually from 1981 through 1986. During the same period the U.S. manufacturing sector enjoyed annual productivity growth which averaged 4 percent.

What has happened to unit labor costs and profit margins in the U.S. in the past 5 years and would you please compare the changes in labor costs over the past 5 years in the U.S. to those in its major trading partners?

Mrs. NORWOOD. It is quite clear that unit labor costs and wage rate increases in the last 5 years have been much lower than in previous years, partly because the rate of inflation has decelerated in manufacturing. For example, over the last year unit labor costs were negative. I think we had a period during the 1970's and the 1960's when wages were increased more than productivity and where because of the tremendous inflation that we had we were finding an even greater increase built into collective bargaining agreements that had cost-of-living adjustments. So everything got out of line.

It is clearly true that increases in productivity now are not being reflected in increases in wages. You are quite right about that. We have become noncompetitive in a number of areas, and somehow costs have to be reduced in order to reduce prices. That does not mean it has to come out of wages, of course, but labor costs have been considered to be four-fifths or more of the total cost. That is a continuing problem and I think will be with us for a long time.

Senator PROXMIRE. Is that in part because of a relatively high level of unemployment compared to what we had in the 1950's and 1960's when unemployment averaged 5 or 6 percent? It is much less than it was a little while ago, but it is still substantially higher than it was in the 1950's and 1960's, and therefore, I presume that labor's bargaining position is weaker.

Mrs. NORWOOD. That is certainly a factor. I think a greater factor is the restructuring of industry that is occurring. Those workers who have had the largest bargaining power tend to be in the industries that are going through the greatest difficulty right now.

Senator PROXMIRE. Does that mean the labor unions are weaker?

Mrs. NORWOOD. I wouldn't say that the unions are weaker, but the unions have been strongest in the past in those industries which now are going through tremendous structural change, where plants are closing down and where the emphasis both of the union and of management seems to be to keep jobs rather than to worry about trying to increase wage rates. The union movement is clearly recognizing the need to move into many of the service-producing industries to strengthen their position there, but they have lost membership disproportionately to the decline in employment.

Senator PROXMIRE. Last Sunday's New York News Day featured an article entitled "Inflation Comes Back for More." The subtitle reads "The 1987 rate is already 6 percent. Are rough times ahead?"

For the 3 months ending in April the CPI rose at a 5.3 percent annual rate compared to 2.5 percent the 3 months ending in December. What caused this increase in the inflation rate and do the figures suggest to you that inflation is returning?

Mrs. NORWOOD. We don't see any evidence of very high rates of inflation, but we may be seeing and are seeing somewhat higher rates of price increase than in the past. We are anticipating and we are beginning to see increases in the price of imports, and that is going to go through the economy. The big issue, as I indicated last month or the month before, is what will be the reaction of American producers as import prices go up. If we raise our prices along with the prices of imports we will have more inflation. If, on the other hand, we keep our prices low and try to expand our markets we would have a different situation.

Perhaps Mr. Dalton has something more to say about that.

Mr. DALTON. No, I don't think so. Specifically, the reason for the acceleration is we no longer have the ameliorating effects of lower energy prices. In part that is the explanation. We also had some very, very substantial increases in the last 2 months in apparel prices, which are apparently associated with higher import prices.

Senator PROXMIRE. Except for 1986 the inflation rate has been just under 4 percent for every year since 1982. In 1986 the inflation rate would have been 4 percent except for the decline in oil prices. What explains this 4 percent ceiling over the inflation rate?

Mrs. NORWOOD. I don't know. Perhaps, stickiness of prices, a growing economy, expansionism.

Senator PROXMIRE. In previous testimony you listed a number of industries that have not regained all the jobs lost during the 1981-82 recession. Are there currently any industries that still have not recovered all the jobs lost during that recession, in view of the recent increase in employment?

Mrs. NORWOOD. Yes. There happen to be 10 industries that have lost employment during the recovery period.

Senator PROXMIRE. They still have lost even as of May 1987?

Mrs. NORWOOD. Yes.

Senator PROXMIRE. Can you tell us what those 10 industries are?

Mrs. NORWOOD. Mining lost close to 300,000; primary metals and steel, nonelectrical machinery, instruments, tobacco, apparel, chemicals, petroleum and coal, and leather. All have lost employment since November 1982. Textile employment is about at the same level it was in November 1982. In addition several other industries have not regained all of the jobs lost during the 1981-82 recession.

Senator PROXMIRE. For most of the recovery from the 1981-82 recession the unemployment for adult women was higher than for adult men. By March 1987, the unemployment rate for women had fallen to 5.8 percent, the same rate as for men, and both fell to 5.5 percent in April. Since women work predominantly in service industries, does the decline in the unemployment rate for women suggest that the service industries can expect labor shortages? Are there any service industries that are currently experiencing labor problems?

Mrs. **Norwood**. I think women are beginning to move into some of the occupations in the service industries which require greater education and training. At the moment we don't see any real evidence of labor shortages.

Senator **Proxmire**. Let me ask you about one other area of labor shortage that might tie into that. According to your May 14 release on the youth labor force, the overall population of 16- to 24-year-olds will be about 450,000 lower this summer than it was last summer. I am wondering how that will affect employment opportunities and wages for young people this summer, and are there any industries that are being adversely affected by the decline in the number of young people available?

Mr. **Plewes**. I think that there are a couple of things going on. First of all, the total number of young people in the population is going down, but that is somewhat counterbalanced by the increasing tendency for those young people who are around to participate in the labor market. So, on balance there seems to be an offset.

Some industries may be having shortages and some areas of the country, as well. We can look at the New England economy as an example, with a very low unemployment rate not only in Massachusetts, which we have on a monthly basis, but in other States up there. We are beginning to see some real shortages in certain industries in New England. There may also be other areas of the country and certain industries where there are shortages. How these are related to the amount of wages that the industries are offering to pay to people is not quite clear.

Mrs. **Norwood**. This demonstrates, I think, Senator, the problem that we have in the statistical system. We have quite good data, high quality at the national level, but the labor market developments are really occurring at local levels, and our data at local levels are not as good as we would like. There seems to be a clear shift; that is, increases in employment seem to be in the western States and decreases in unemployment seem to be in the East. We have graphed that, and it is quite striking. This really fits in with what Mr. Plewes was saying. In some parts of the country the labor force is smaller than the economy would seem to need and in other parts of the country employment is growing and people may be beginning to move now.

Senator **Proxmire**. I am going to have to leave to go to the floor, but let me ask one more question. The revised payroll figures show that manufacturing employment is about 200,000 less than we originally thought. Since September of 1986 we have seen a slow but steady rise in payroll employment in manufacturing under the old figures. Do the new figures change that picture?

Mrs. **Norwood**. Not really. Over the past year manufacturing has been flat. There has been no increase in employment over the past year. But since January there has been an increase of about 60,000. It is small, a little bit each month, but there seems to be a slightly different pattern since the beginning of this year in manufacturing.

Senator **Proxmire**. Thank you very, very much. I apologize for having to leave. I think you made an excellent appearance, as you always do.

The committee will stand in adjournment.

[Whereupon, at 10 a.m., the committee adjourned, subject to the call of the Chair.]

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